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E. S. GAILLARD, A.M., M.D., LL.D.,

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ORIGINAL ARTICLES.

"Qui Docet Discit."

The New Fever of Southern Louisiana. Its Etiology, Nature, Symptoms and Treatment.

By A. C. LOVE, M.D., Donaldsonville, La.

This malarial fever, here popularly known as "rice" fever, has, during the past summer, prevailed to an unusual extent in the rice-growing parishes of this State, and in some localities, because of the supposed resemblance of its symptoms to those of yellow fever, its appearance has occasioned alarm and afforded material for sensational reports. So deeply rooted became the suspicion thus excited in the public mind, that the representatives of the National Board of Health in New Orleans felt justified in appointing a committee of physicians, with instructions "to proceed to the lower coast of the Mississippi river, to inspect and report in regard to the prevalence of any infectious or other form of fever prevailing in that section of the State." The report of that committee, made by its chairman, J. Dickson Bruns, M.D., is an able presentation of the facts ascertained, and evinces that the task assigned to the committee was faithfully performed. After giving an account of the history and symptoms of several cases of fever visited by the committee, together with the opinions of the resident physicians of that section of the State, it is concluded that the "disease prevailing in the lower coast is an endemic malarial fever of remittent type, and for the most part of a mild character," and further, that "its unusual prevalence is due partly to the meteorological conditions of the past summer, and partly to the widespread cultivation of rice."

Having resided for the past two years in a rice-growing district, and having noted the annual outbreak of this fever, the writer has been led to give the subject some study, and it shall be his object in this article to make a few observations on the telluric conditions that produce it, and to briefly notice its symptoms and treatment.

Large areas of land, for a time submerged, and then exposed to the rays of the summer sun, have long been known to afford fertile soil for the generation of marsh miasm. History furnishes numerous examples of the deleterious effect exerted by the poisonous air of such localities on the health of man. In the environs of ancient Rome there were swamps and marshes, and every summer, after the evaporation of their waters, her inhabitants suffered from visitations of paludal fevers. These often became epidemic, and their ravages so impressed the pagan mind, that a temple was erected to the goddess Febris. Two hundred years ago, because of deficient drainage, and the close proximity of the marshes of Cambridgeshire and Lincolnshire, London afforded a field in which malarial fevers of a malignant type raged with great fatality.

But coming nearer home, and our

own time, in 1858, a notable example of the ill effects resulting to the public health from such a condition of things, was furnished by the inundation of a portion of the parish of Plaquemine, in this State, caused by the breaking of the levees and the formation of crevasses above the city of New Orleans. For fifty miles along the right bank of the river, and during a period of five months, the ground was covered with water, in depth varying, in different localities, from two to ten feet. Dr. D. R. Fox, in an article on "The Topography of the Parish of Plaquemine," read before the Louisiana State Medical Association, says: "About the middle of August the water began to subside; during the time it covered the land there was *no sickness whatever*, but after the water had disappeared, late in September and in October, there were many cases of pernicious fever, and at the extremes of the inundated district a severe endemic malarial pneumonia occurred on two plantations, which was extremely fatal." *

In like manner do the battures of the Mississippi river, under conditions favorable for it, furnish a fertile soil for the production of malaria, whose influence is seen on the health of those residing in their immediate vicinity. This fact has been so often demonstrated that the creoles of Southern Louisiana have learned to regard a full river in May or June, which covers the battures and saturates the soil, by transudation through the levees, as an unerring indication of an unhealthy year.

Accepting Niemeyer's definition of malaria, that it "consists of low vegetable organisms, whose development is chiefly due to the putrefaction of vegetable substances," there is, in the rice fields of Southern Louisiana everything necessary for its production. From Bayou Plaquemine to the Belize there is an alluvial soil. Excavations made in it for laying the foundations of the gas works, in New Orleans, brought to view what Dr. Dowler called "four successive forests of cypress trees,"* but which was most probably, as Dr. Foster suggests, "only the driftwood brought down by the river in former times."†

In such a soil, composed of the sediment deposited by the turbid waters of the Mississippi, there is a large per centage of organic matter which only requires the presence of the proper factors, moisture and heat, for the production of malaria. The first of these factors is furnished by the waters that irrigate our rice fields; the second, by the intense heat of our summer sun.

Until recent years, the culture of rice in this portion of the State was unknown, but the pioneers in this branch of agriculture were favored with such gratifying successes, viewed from a financial standpoint, that many planters have been induced to embark in it. New lands being best adapted to the culture of rice, many sugar plantations, abandoned since the late civil war, and overgrown with brambles and bushes, have been re-cleared and converted into rice farms. Thus annually has the soil of hundreds of acres, rich with organic matter, saturated by the rising of the water level—because of the long neglect of drainage, and for years shaded by a dense growth of vegetation—been upturned preparatory to planting. As early as the middle of January, the soil is turned with ploughs, breaking it to the depth of two inches, and by the latter part of March the rice is sown and covered by harrowing the lands. Not until the young plant has reached the height of several inches is the irrigation water turned on the several fields through canals leading from the Mississippi river. At that time there is a luxuriant growth of young vegetation, consisting of non-aquatic weeds and grasses, which sprang up simultaneously with the rice plants. When the fields are inundated, and the air necessary for the existence of this vegetation is excluded, it droops and dies, and affords large quantities of material for decomposition. Until the latter part of July the waters are, by means of levees, retained on the fields, but about this time the heads of the rice plant assume a golden color, showing that the grain is fully matured, the levees are then cut, and the waters turned off for the harvesting of the crop.

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* Proceedings of Louisiana State Medical Association, 1879.

* Tableau of N. O.

† Prehistoric races of U. S.

Up to this time the health of those residing on, and in the immediate vicinity of rice farms is not materially affected by malarial causes. My observations have confirmed in my mind the old teachings of the medical text-books, that large bodies of water exert a salutary influence on the health of those residing near them; and during the Spring and early Summer, in proportion to population, I have encountered a greater number of cases of malarial fevers on well drained sugar plantations than on rice farms. Until the latter part of July, and until a week after the time of turning off the waters from the rice fields, all the residents of two rice farms which I had under observation enjoyed, without a single exception, remarkably good health, though for several weeks previous I had visited many cases of remittent fever on neighboring sugar plantations. On "Pelican Place," a rice farm of about one hundred acres, there resided two white families, consisting in all of sixteen persons, through whose yard passed a canal for conveying water from the river to the rice fields. On the afternoon of July 30th, one week after the draining of the rice fields, an adult male member of one of these families was seized with a chill, followed by fever which proved to be of the remittent type. His temterature rose to 106° and the fever, with slight morning remissions of from one-half to one degree, continued for 96 hours, leaving the patient very much prostrated. This case was marked by constipation, great irritability of stomach, with vomiting, excruciating pains in the loins and lower extremities, jactitation and sighing respiration. The tongue was broad, red, and covered with white fur; the pulse was full, strong, and 120 to the minute; the urine was dark straw color, and scanty; the skin was harsh and dry, and showing no tendency to capillary congestion. Soon after the recovery of this patient another in the same family became sick with similar symptoms, and within three weeks twelve of the sixteen persons composing the two families were prostrated by attacks of remittent fever.

The following tabular statement will explain itself:

Pelican Place—(Whites).

	Number Residents.	*Number Cases.*	*Number Recoveries.*
Over 10 Years,	12	10	10
Under 10 Years,	4	2	2
	16	12	12

Leblanc Plantation is situated on the left bank of the Mississippi river, one mile above the town of Donaldsonville. Here seven hundred and fifty acres were sown with rice. The field, extending back from the river front and surrounding the manager's residence and the negro quarters, furnished a splendid opportunity for the study of the pernicious influence of marsh miasm on the health of man. About April 12th water was turned on the field and it was kept inundated until July 25th. During this time the health of the occupants of this plantation was, without a single exception, good. The first week of August, however, ushered in an epidemic of remittent fever.

The following table shows the number of persons, white and colored, over and under the age of ten years, residing on the plantation, and the number of persons attacked with remittent fever between Aug. 1st and Sept. 15th, together with the number of recoveries :

Leblanc Plantation—(*Whites*).

	Number Residents.	*Number Cases.*	*Number Recoveries.*
Over 10 Years,	5	5	5
Under 10 Years,	2	2	2
	7	7	7
	Colored.		
Over 10 Years,	55	48	48
Under 10 Years,	40	34	34
	95	82	82

A fact worthy of record in this connection is, that of three hundred and fifty laborers who were employed for nearly two weeks in harvesting the crop, and who entered the field after sun-rise and left it before sun-set, spending the night at their own homes miles away, not a half dozen, to my knowledge, suffered from attacks of rice fever.

It will be seen from the foregoing tables that this epidemic of rice fever was attended with no mortality on the two plantations which were under my special observation. The disease, though of little fatality, often presented distressing symptoms. Prominent among these were gastric irritability and retching, some patients vomiting bilious fluid for two or three days, and torturing pains in the loins and lower extremities. But neither on, nor in the vicinity of a rice farm has the writer, this year, encountered a case of hæmaturia or a case of fever whose symptoms indicated that it was of the hæmorrhagic type. A few such cases have been seen, but they were on sugar plantations and far removed from rice growing districts. In August, 1879, there was a case of remittent fever on a rice farm in this parish in which there was hæmorrhage from the stomach and whose vomited matter was forwarded to Prof. Joseph Jones, M.D., now President of the Louisiana State board of Health, who kindly made an analysis of it and wrote the following letter :

NEW ORLEANS, LA.,
Aug. 28th 1879.

A. C. LOVE, M.D.,

Dear Doctor :—In reply to your favor of 21st inst. allow me to say that I find upon chemical analysis the fluid to be similar to black vomit—that is, vomited matter from the stomach containing flakes of black matter and albumen.

* * * * *

With kind regards,
Truly yours,
JOSEPH JONES.

Rice fever being of Malarial origin it is amenable to sulphate of quinine and other preparations of Peruvian bark. As it is important to cinchonize the patient as early as possible, the first opportunity offered by any perceptible decline in temperature should be improved, and a dose, from fifteen to twenty grains, of quinine given, and its effects continued by smaller doses at intervals of four to six hours. The cathartic most used was the calomel and bicarbonate of soda powder, but a drachm dose of the sulphate of manganese, dissolved in a half glass of water, was used in several cases with good results, this drug acting briskly and in the course of three hours producing several copious evacuations of a watery, bilious character.

As a preventive of rice fever, in those with coated tongues, constipation and præcordial heaviness, the following was used with happy effect :

℞ Chirettæ Tinc.,
Cinchonæ Comp. Tinc āā f ℥ j.
Rhœi Syrupi, . . . f ℥ ij.

M. Sig. A tablespoonful every morning.

An objection to it, however, was its unpalatableness and subsequently, having been furnished by McKesson & Robbins, of New York, with the extract of Chiretta, the following formula was found preferable :

℞ Quin. Sulph., . . . ℈ ij.
Chirettæ Ext.,
Rhœi Ext., . . āā ℥ j.

M. Ft. pil No. XXX. Sig. Three pills every morning.

With such facts; with so entire an absence of mortality; with such uniform freedom from black vomit; and with such absolute amenability to the influences of Peruvian bark and its different alkaloids and preparations, how is it possible for any one to regard this so-called fever as "in any way allied to yellow fever ?"

Color Blindness and Defective Vision.—Their Coutrol.

By Dr. B. JOY JEFFRIES. Boston, Mass.

There is no royal road to knowledge. An understanding of color-blindness, just how it is dangerous, and how it can be perfectly detected, can only be obtained by study, careful observation, and some practice. Every new and so important subject, which comes up in the profession, is, so to speak, a nuisance for the general physician, and even for the eager specialist. Astigmatism, the action of the ocular muscles, refraction and accommodation, and, lastly, the metric system in these, have pushed the busy ophthalmic surgeon, who has had to master each and every one of these points, or else quickly drop into obscurity, or take to dubious practices to retain his clientelle. With every advance in medicine the several medical departments of the Government must, of course, keep pace. This sends to the medical officers more blanks, more work, more digging. The reception by them recently of my manual on "Color-Blindness ; its Dangers and its Detection," and the accompanying set of worsteds for Holmgren's test, with the official requirement of familiarity with the subject, and a very important practical use of the examinations and the inevitable "report on the same," has naturally been one of those periodic nuisances from which they could not get away. Doctors generally, and even ophthalmic surgeons, may avoid the whole question of color-blindness by turning it over to the medical experts interesting themselves in it.

I said in my manual that "both army and navy surgeons are eminently qualified to learn and use the present methods of testing for color-blindness, the dangers from which they can equally appreciate. The Government can, and no doubt will, carry out proper examinations for color-blindness in the army and navy, General national laws can also be enacted as to the merchant marine ; international will come in time as a matter of necessity."

My prediction has held true, and so far as I have known, medical officers of the army, navy, and marine hospital service have been able to take hold of the subject of color-blindness, and through my manual, work it up and apply the requisite test there recommended. As is well known, the army and navy carry out examinations. In the merchant marine, so far, only pilots are tested. No general law governs sailors. In Congress is a bill to initiate an International Commission, the honor of which our country can have if this bill is passed. The Belgian Government is urged, through the report of a commission there, to initiate an International Commission in reference to *railroads* for a similar discussion and agreement on standards of test and standards of requirement.

Now, there is no power to force the various boards, committees, commissioners and railroad officials, who, from their position, are, or who have been made, directly interested in the question of color-blindness, to thoroughly study up the subject, or avail themselves of the means in their power to investigate it, as does the Government its medical officers. Hence the rules or no rules, action or no action, made as reported by these bodies, which have exerted so much comment, criticism, or ridicule. But the general community are in various ways learning about color-blindness and its positive dangers faster than these bodies of men. They are also becoming so educated in reference to the whole subject that the attempts to cover up official neglect by silence or belittling the subject and its advocates, is already failing of its purpose. No intelligent person, who is not interested to the contrary, believes now that a color-blind engineer or sailor is as safe as one who has a normal color perception, or that a man with but one-half the average power of sight is as safe as one having normal power or above it, as so many have.

I said, in my manual: "The difficulties with the railroads are, however, very great. Here the interests and safety of the community have to contend with ignorance, prejudice, pecuniary considerations, and incredulity born of supposed immunity from danger." The experience of the two years, past since this was written, amply proves it true. In conversation with one of our railroad presidents, last spring, I casually remarked that the law for control had passed in Connecticut. He quickly replied, "I am very sorry to hear that." Recently, I jocosely remarked to the same gentleman, "Massachusetts will have a color-blind law next winter;" when he, taking it in earnest, again said, "I am very sorry to hear that." This fairly represents a spirit of antagonism due to one or more of the causes I have above mentioned. Although the cry of expense is raised by railroad officials, yet were medical experts to offer to make all examinations without cost to the corporation or the employé, it would not further in the least the control of danger from visual defects and color-blindness on our railroads. It is a police and not a sanitary reform, and nothing but State laws, carried out by honest State officials, will do this. Even with a State law properly and fairly made, we have seen by the papers what has been done, to an extent, to excite ridicule—to keep, as in Connecticut, employés in their places whom the legal medical inspectors had declared to be incompetent under the law; and we have seen how the Board directed by law to carry out the provisions of legislative enactment, have yielded to political and other pressure in giving certificates on their own responsibility. It is true that the Supervising Surgeon-General of the Marine Hospital Service complains equally of the pressure in the Treasury Department to keep pur-blind and color-blind pilots in their places, which has been repeatedly successful; the inspectors taking the cases deliberately out of the hands of the surgeons of marine hospitals, and giving them licenses on their own responsibility; or giving a color-blind pilot a license as *master*, the latter not being required to be tested. Sailors of the merchant marine are not required to be tested for color-blindness or any physical defect or disease. An imbecile, a man with double rupture, or weak with syphilis, or in deep consumption, may be shipped as an able-bodied seaman, and the ship-owners have to pay for him as if good, and all expenses connected with dropping him in the first port arrived at, etc.

As to railroad corporations carrying out examinations themselves, the universal experience and result, both in Europe and this country, has been that all tests made by railroad officials have been a perfect farce, most unfair to the travelling community and the employés. The reader's laughter would be readily excited by a recital of my experience in this direction, were the matter not a too serious one. Nothing but State laws, honestly carried out, will insure a fair examination by competent experts of all employed in running trains, and the dismissal of those found with defective vision or color-blindness. Now, whenever tests are made, officials are almost powerless to dispose of the unfit. They need the protection of a *law*. Without a State law, men refused on one road need but apply to the next, and when, as now, but one State has a law of control, men refused in Connecticut need but come back into Massachusetts to be employed. An inter-State movement is here needed, or the intervention of the General Government. In the same way, on the ocean, careful elimination of the color-blind from the *personnel* of one vessel will not prevent another, with color blind in the watch, from running into her. Hence the value of an international commission to call attention to the subject, and thus enforce laws.

The prevalence of color-blindness in the male sex, its hidden dangers, and the difficulty of its absolute detection in every form and degree, and the still greater prevalence of defective vision, have been, so to speak, suddenly pressed upon the various railroad authorities and State railroad commissioners. The railroad officials who have the power of employment and dismissal are the ones most particularly interested. Whilst they can best understand, from practical familiarity, the risks of ocular defects, they are rarely those who can appreciate the absolute need of medical expert determination of an employé's fitness. When, therefore, as in Massachusetts, those, so to speak, over them—say, the railroad commissioners—from lack of knowledge and proper study of the subject, report that they, or any intelligent railroad official, can decide on a man's fitness, this idea is quickly acted on, till the experience of Europe has been gained here; for instance, in Connecticut, where, notwithstanding every form of opposing argument and plea, no one has ventured the assertion that tests should be entrusted to other than competent experts; experience showing how necessary these were.

These officials, who hire and dismiss men, are often from the ranks themselves, and to turn off, or to turn over to less lucrative employment, a young color-blind engineer, or an old one with failing or defective sight, is as much, perhaps, as the official's life or place, at least, is worth, if the employé has friends at court to help him, or can make them outside by the cry of persecution. I recall the pathetic tone of just such an official when he asked me, "What shall we do with our old engineers?" my testing of some before him having impressed upon him the danger of such men on the road. He would gladly have thrown the responsibility on the State medical experts, and said how much better this would be for all hands, if the railroads would but mutually agree upon it. Opposition to laws of control and their proper enforcement, without which there is no protection, on the part of railroad officials, induced by "ignorance, prejudice, or pecuniary considerations,"[3] may receive a sudden and very effective check by the great controlling stockholders directing such officials to cease their opposition. They are learning, in spite of the dust thrown into their eyes, that thorough examinations cost but little money, and that any accident which can be supposed to have happened from defective vision or color-blindness, will be a very expensive matter for their individual pockets. The following, from the N. Y. *Times* of Oct. 8, 1880, is significant:

"A few years ago a collision occurred near Norfolk, Va., between the tugboat Lumberman and the steamship Isaac Bell, resulting in the loss of ten lives. (Another paper says one hundred.) A coroner's inquest was held without definite result, the general impression being that one or the other of the pilots was intoxicated. There could be no proof of this, however, and the pilots were released. The pilot of the tugboat Lumberman was examined by the surgeon of the Maine Hospital Service during the current quarter, and found to be color-blind. A rumor has reached the Marine Hospital Bureau that the pilot of the Isaac Bell is also color-blind. Although there is no record of this in the Marine Bureau, it is thought very probable that the collision was caused by the color-blindness of the pilot. It is probable that the matter will be investigated."

How many accidents, if "*investigated*," would be proved to be caused by defective vision or color-blindness!! A few years ago I had a pilot under my care with very great loss of vision. I confess my blood curdled when he finally informed me that he was steering a steamer at the time of a teerible accident in Long Island Sound. His quiet remark to me, "I declare, Doctor, I did not see that schooner till she was right under us." This was an excuse for himself. Any idea that with his rapidly-failing sight he should have given up his place never occurred to him. That he should have been tested periodically by a competent medical man, under the U. S. rules, he and his friends would have regarded as taking away the rights and liberties of a freeman. Had he been so tested, and the medical expert had refused to sign his certificate of fitness, no doubt his many friends and admirers would have "pressed" the inspectors to license him, and caused the dismissal of the medical officer "for cause."

Now, what does all this mean and show? Why, simply the need of civil service honestly carried out, and the need of keeping at least visual defects and color-blindness out of politics. I have elsewhere said that the community, when they learn the truth about the precise dangers and the recklessness on the part of officials carrying it, in reference to the employment of defective engineers and train hands, etc., will turn round and be very hard on the employés. This is human nature, and will as surely come as the sun rises. It has been the universal experience in all such matters. Time will show how I have striven to protect the employé in this respect, and the truthfulness of the remark of one when he said, "Doctor, you are our *best* friend."

After some four years of incessant labor, I think I have convinced the community, including recalcitrant railroad people, of the prevalence of color-blindness. The *practical* railroad man, however, who would not let a doctor build his bridge, or a civil engineer operate on his eye for cataract, cannot understand the danger from color-blindness. *Defective vision*, when excessive, as from near-sightedness, he *may* appreciate. He cannot get rid of the idea that his color-blind engineer or fireman *does* use his color sense to distinguish the night signals. An official in Connecticut told me one of his engineers "could not tell any color," and yet he distinguished the colored signals. He would listen to no explanation of mine as to how he did this, and was only silenced by my asking by what sense did the employé distinguish the signals if he had no color perception ?

Railroad officials and commissioners are now forced to admit the existence of color-blindness and its frequency. They are not yet ready, however, to admit its danger, just as they are not ready to admit that employés should have average visual power to be safe in railroad work connected with signal giving and reading. With reference to this last it is useless to argue. The time is not far distant when the community will demand expert proof of every employé's having *normal* eyesight, and this will be found to be, to every one's surprise, a much *higher* standard than demanded by any laws now made or proposed in reference to railroad employés or sailors.

All railroad people are naturally wholly antagonistic to any law compelling them to act as they have not hitherto done. They are, so to speak, eminently practical men, wholly wedded to the theory that a man who, to their test, seems to see colored signals nearly always right, cannot be dangerous; and they, even when admitting danger, will insist on *practical* tests with flags and lanterns under conditions favorable to the examined. Such tests were long ago found to be useless and unfair to the employé, as well as almost impossible to be carried out so as to exclude the possibility of cheating on his part or his friends, etc. The loss of time of the employé, and the great cost of testing, would prevent this method, were it not wholly worthless to determine whether a color-blind sees colors as we do. It has been absolutely *proved*, and even quite generally *admitted*, that the color-blind distinguish between the red and green lights by their *intensity solely*, or by extraneous circumstances having nothing to do with the question of the color of the lights. This same point, of men being tried with what they were accustomed to see, arose in reference to the examination of pilots, and the Treasury Department, against the advice of the Supervising Surgeon-General of the Marine Hospital Service, yielded to the "pressure" brought upon them so far as to allow "Inspectors of Steamboats" to test pilots declared partly defective by Marine Hospital Service surgeons, with lanterns, and grant them a license on the result. Dr. Hutton, one of the Surgeons, reports in detail a case of a color-blind pilot, in Detroit, when these inspectors and the pilot's friends tried to get a certificate of competency out of the surgeon, or to force him to say the man was incompletely color-blind, and then, according to the Treasury Department rules, they could test him, and, as has been the case, probably unusually, grant him a license. How dangerous the man was, Dr. Hutton's report will show. The Inspector's and the pilot's friends insisted on tests in the river. Fortunately even in them he failed. The special point of interest is Dr. Hutton's testimony, thus: "But when tested in lights, of which he knew nothing, it confirmed what I decided within five minutes after commencing the first examination." "So far as the test on the river among vessels is concerned, I have maintained that it is not a test at all. Vessels' lights have fixed positions. A process of mental calculation, coupled with his knowledge of the relative positions of these lights, enables him to decide the matter, after a little reflection, as to the position and course of the vessel, independently of his chromatic sense." "On the river he made fewer mistakes. Two red lights and one green light, about a mile down the river, were pointed out. Of these he made out *one* red, but not the others. Two stationary red lights on the shore being pointed out, he said he saw *one*, but not the other. Three moving red lights were properly named. Three of same in opposite directions were made out as two only. He saw "green" lights where none existed; also, in one instance, pointed out a red light where none existed." He made the same mistakes on railroad switches and horse-car lights.

In a similar manner the Board of Health of Connecticut have yielded to the political and other pressure in allowing employés found defective by the medical experts appointed, to be tested by lanterns and flags. Of course the result will be what it has been in other parts of the world—viz., that it is no test at all, wholly theoretical and impractical, besides opening wide the door for deception and cheating. The whole question is thoroughly explained and discussed in my manual, to which I have repeatedly called the attention of those interested. There are described ways and means of testing and proving how the color-blind do not see the signals through their sense of color, but distinguish them solely by the difference in intensity of light. Prof. Holmgren, whom I quote, well says: "Ask any superior official of a road if he would be willing to take charge of and run a locomotive, assuming the responsibility, when uncolored signals alone were permitted, and a feeble light meant 'danger,' a medium one, '*attention* or *caution*,' and a strong one, 'road clear.' If he says no, tell him that these are just the conditions under which every color-blind engineer has performed his duties. The absurdity is evident at once."

There is no royal road to knowledge. Those whose official duty requires them to understand thoroughly this whole question, will not even read what has been most plainly put in print, much less study it. Those, whose duty to investigate the subject is now a law, have neglected to take advantage of repeated offers of practical explanation of the methods explained in my book. I have never found even the most skeptical otherwise than thoroughly convinced of any degree of color-blindness being dangerous on the railroads and the sea, when they would take the time and the pains to watch examinations made with the various apparatus devised for this purpose, and which so perfectly imitates the conditions of the signals, but leaves out the extraneous conditions that help the color-blind, which extraneous conditions (explained in my book) can never be relied on.

The absurdity of railroad officials

and steamboat inspectors testing for color-blindness by flags and lanterns is shown by this—namely, that if they use the *bluish*-green lights employed both on many roads, and sold as often as the green for ship's side-lights, the employé or the pilot can, even if color-blind, see it very much as we do, only somewhat darker. When this light is shown him on the road, he will, of course, say *green*, because other people call it so. Any different light he will call red, because he knows that is the name of the other one shown, which he does not, of course, see is *red*, but only *different* from the other. The green in the glass makes it darker to him, but the blue he sees, since all red or green blind people (one defect practically involving the other) see blue and yellow as we do. Those unfamiliar with the fact would be surprised to see how utterly different are the two lights sold in the shops and used to go on the same (the starboard) side of the vessels. Now this dressed bluish-green glass breaks down the *amount* of light very greatly, and prevents its being seen by even the normal-eyed at a distance it must be to insure safety. Thus the color-blind will escape detection by such officials, and these latter will, as they have, become strengthened in their belief of the infrequency of the defect and its harmlessness. But this will not prevent accidents such as spoken of above, since the next light the color-blind employé sees may be a green bull's-eye or Fresnel, which, if he supposes it far-off, will come to him as red, or if he supposes it near, will come to him as a white light. A color-blind pilot, in my office, not six feet from the window, where I held up the glass of the side-lights, declared the brilliant *red* to be *green*. This bluish-green glass he said was *blue*, not associating in his mind the idea of its being a *starboard* light, which it was made for. The man was a most typical case of color-blindness. Does the community suppose they are protected by law when this man has been dismissed from his position? Quite the reverse. By the present law of the Treasury Department, the Inspectors could not license this man as a *pilot*, since the Marine Hospital surgeon would not sign his certificate; but they gave him a license as *master*, because a master does not have to be tested. There was no possible way of convincing the man that he could not distinguish the red and green lights as well as any one else. Color-blind as the man was, he would have escaped detection nine chances out of ten by tests in the lanterns, made by inspectors.

It is the old story of civil service reform. The various heads of departments, other than medical, do not rely wholy on these latter where a subject is so new and perplexing, and where every form of pressure is brought to bear upon them not to dismiss color-blind pilots, or those with defective eye-sight. Here will be seen the great value of the International Commission, to determine standards of requirement and tests for officers and sailors, etc., a bill for which is now in Congress. On this Commission there will be several officers and scientific men from the several countries taking part in it. The whole subject, in its scientific, but more especially its practical relations, will be thoroughly discussed. Therefore the report they make will have great force and assist the heads of the various departments in framing their rules and regulations, whilst popular opinion will support them in resisting the importunities of the color-blind and their friends, etc., to be kept in place or admitted to duty. The report of this commission would also have great force on the railroads, teaching the officials the danger of color-blindness and defective sight against their will, and supporting the claims of the community that some examination shall be made and some standard required.

I have said I believed if medical experts agreed to do all the work necessary, without compensation, it would not advance the cause of control of defective vision. Let, however, the stockholders be mulcted by heavy damages and dividends passed, from an accident caused thereby, and the law would be clamored for. Recalcitrant railroad officials would be dropped at the next annual election, against which they naturally would fight as strongly as the color-blind employé. A broken arm or leg will cost any railroad company more than the whole expense of a most thorough examination of all the employés of the road. An accident from defective sight would give these officials now anxious, but *unable*, to do their duty, the necessary backing up of the general sentiment of the community. It is more easy, however, to enact laws than to carry them out honestly..

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ECLECTIC DEPARTMENT.

"Carpere et colligere."

The Dangers of Simple Uterine Manipulations and Operations. By GEO. J. ENGLEMANN, M.D., St. Louis, Missouri.

It will probably appear strange to you that I should speak of the danger connected with manipulations of the uterus, and that I should relate to you my own sad experience, and the unfortunate accidents which have befallen the ablest of my colleagues; that I should tell you of the risk attending even the slightest interference with the womb of woman, whilst you hear almost daily of dangerous operations succesfully performed upon that much treated and maltreated organ; every medical journal which falls into your hands contains such accounts; each new operation outstripping its predecessor in boldness, each more desperate than the other, until we fairly wonder at the recklessness of the operators and the patience of women, and are forced to the conclusion that we may do with the uterus what we will, and the insult will be kindly received.

There is, however, another and a darker side to this very attractive and enticing picture, and it is this which I propose to analyze for you, believing that a detailed report of a few of the unfortunate cases, though it may fail to excite your admiration, will be of greater practical advantage than the reports of successful cases to which you are constantly treated, especially to those who have been fortunate enough to escape any such mishap as yet.

I received my first warning, and fortunately a mild one, shortly after I entered upon the practice of medicine in my native city in 1873; my attention was moreover attracted to the subject as a case was then pending in the courts, which was a most instructive one—death in consequence of bilateral incision of the cervix; the operation having been performed in the office of the physician, and the patient sent home in a carriage, cellulitis, peritonitis, and death followed in rapid succession.

The warning I then received taught me caution in uterine manipulations, and told me that rest and quiet must follow, as a necessary sequence, upon even slight interference with that organ. From this time on, I am happy to say, I have met with no untoward accident of any kind, until the past winter, when three unfortunate cases followed in rapid succession: two deaths, and a serious pelvic peritonitis, in consequence of but very trifling interference with the womb.

They have caused me great annoyance and pain, as you may well imagine, and have been the subject of much earnest thought and study; in one case serious results originated in a slight carelessness on the part of the patient, in another from a disregard of the apparently unnecessary strict injunctions given, but for the third I cannot well account.

I will now relate these cases in connection with other similar ones which occurred in the hands of our most careful and reputed physicians, and will refer briefly to their more striking features, as these points are usually ignored in text-books and monographs alike; the intra-uterine injections being apparently the only interference which is worthy of being mentioned as at all dangerous.

THE DANGERS ACCOMPANYING THE SIMPLEST MANIPULATIONS ABOUT THE UTERUS.

Great care is necessary in all uterine manipulations; upon this point I would lay some stress on account of the constant resort to the sound and the applicator, even the sponge tent and the intra-uterine syringe, by all physicians, regardless of their experience in uterine therapeutics. This is equally true in the centers of medical learning in the East as it is in the interior of our Western States, where a consulting physician cannot be reached. Dr. Clifton E. Wing, in an address delivered to the physicians of Boston and vicinity, before the Suffolk District Medical Society, on Modern Abuses of Gynacology, April 10th, 1880, says: "It is surprising to see the number of physicians in good standing in the community, who are wanting in proper knowledge of the Diseases of Women, and do not hesitate to confess their ignorance when in conversation with professional brethren, who nevertheless treat patients for uterine ailments, and give them the impression all the while that they are good authority upon such matters. . . . . Some who, at one time and another, have many women in the families in which they practice under local treatment, are not competent even after they have made their examinations to tell what trouble is present." What untold harm is done by unskilled manipulations we may divine, when Dr. T. G. Thomas, the judicious and expert operator, says that he has seen cellulitis and peritonitis, in several cases, follow the use of pessaries in his own hands; and how dangerous an instrument is the sound, the applicator, or the intra-uterine syringe in the hands of careless men, not to speak of the knife, and yet they constantly make use of them.

I, of course, presume that the most ordinary caution is observed, that instruments are skillfully handled, and only introduced into the cavity of the uterus after we have excluded all such conditions in which the organ is peculiarly sensitive;

1. The physiological conditions of menstruation, pregnancy, and involution.

2. Pathological conditions, uterine or circum-uterine inflammation, whether recent or not, indurations, adhesions, etc., all of which contra indicate certain manipulation.

I had thus briefly referred to the dangers arising from the existence of cellulitis, as I deemed the subject sufficiently well understood, and did not properly consider how rarely this most important complication is detected, when limited in extent, and when detected how rarely the warning its presence should convey is understood. I will accordingly add a few words at the suggestion of my valued friend, Dr. T. A. Emmet, who has so thoroughly and so forcibly treated this subject in his recent work (p. 259, 2d ed.), and I can do no better than quote his own words: "I hope that you will point out the great danger which lies in the existence of cellulitis, which will be found to a greater or less degree in almost every case coming under the charge of the surgeon, and that sometimes, even with the most careful preparatory treatment, serious consequences follow *any* surgical interference. This inflammation exists far more frequently than the profession have any idea of, and in a form readily overlooked. *So obscure is its existence sometimes, that I have for years regarded the operations about the female pelvis, as a class, the most dangerous in surgery.*"

However patient the uterus is, and however kindly it bears the varied and serious insults to which it is subjected, there are times, especially during the period of its physiological activity, when it resents all encroachments most violently. This, however, is well known, and may be excluded from our consideration. I plead for the greatest caution at *all* times, as serious accidents may result from the use of the ordinarily most harmless instruments, which are unaccountable, even in the hands of the most skilled.

THE UTERINE SOUND.

I remember well how, in the winter of 1871–'72, Prof. Braun, of Vienna, was demonstrating to his students the passage of the uterine sound into the Fallopian tube in a case of extra-uterine pregnancy—peritonitis and death following the perforation of the uterus by the sound, as proven by the post-mortem examination. Whilst the experienced Professor supposed his sound in the Fallopian tube, it had pierced the uterine wall.

The same error occurred several times in one and the same case in the Berlin clinic in 1871 or '72. It was supposed, from the depth to which the sound entered, that the uterus was unusually large. The post-mortem examination, upon death of the patient from marasmus, showed that in each instance the fatty degenerated organ had been pierced by the sound, as evidenced by the localized inflammation which resulted, pointing out the course of the sound in each instance through the friable wall of the normal sized uterus.

Dr. Emmet informed me that he has had an attack of general cellulitis follow the most careful introduction of a probe into the uterine canal, and Dr. A. J. C. Skene tells me that he has once seen peritonitis follow its use.

Dr. Gregory, of our city, has not unfrequently seen pelvic inflammation following the introduction of the sound, or the use of simple applications, in the out-door department of the hospital, as patients are often obliged to walk long distances to their homes after such treatment.

Dr. Chadwick, of Boston, says: "I have had many attacks of inflammation from the use of the sound, sponge tents, etc., but these cases have been mainly in dispensary practice."

I myself have so far been so fortunate as to escape these accidents, which I consider in a great measure due to the fact that I always prefer to treat patients at their homes, and keep them on their backs for a time after each treatment; that I always resort to bimanual examination before introducing the sound, and enter upon treatment with the milder applications in order to satisfy myself as to the susceptibility of the patient. The same precautions were undoubtedly observed in the cases above related, and yet those unaccountable accidents occurred. The sound is a most useful instrument which we cannot dispense with, yet the more harmeless bimanual palpation relieves us of the necessity of at once resorting to its use in every case, and should always precede the sound in order that this may be judiciously applied, or that we may determine the existence of such physiological or pathological conditions as would preclude its use. In a first examination the utmost care must be exercised.

CASE. *Peritonitis following Reposition of a Retroverted but Movable Uterus, Non-Adherent.*— This patient was a married lady who came under the care of Dr. P. G. Robinson for severe neuralgic attacks, and who was suffering from retroversion and specific ulceration of the os. The symptoms readily yielded, and the erosion kindly healed under the use of protiodide of mercury in combination with iodide of potash. During this treatment Dr. Robinson had frequently replaced the uterus by means of the sound, as it was easily done, and held it in place by cotton tampons in the posterior cul-de-sac. After a month of such treatment the uterus retained its normal position, and the patient left, remaining away three or four months, her health improving during that time.

Two days after her return she again sent for Dr. Robinson, complaining of great pain in back and thighs, which had come on suddenly after exerting herself in unpacking and the lifting of heavy trunks. Upon examination the uterus was found retroverted, but no traces of the former inflammatory condition or the erosion remained. Dr. Robinson, as usual, replaced the uterus, after introduction of the sound, without the slightest difficulty, and advised her to lie down quietly until he should see her upon the following day. This was at 11 A.M.; at 4 P.M. he was hastily summoned, and found his patient in a state of great nervous prostration, with high fever, temperature 103°, 104°, headache, nausea and vomiting; a severe chill, lasting from 2 P.M. until 2½ P.M., had preceded the fever. Physical examination revealed considerable abdominal distension and tenderness, with some slight tenderness about the cervix; these symptoms subsided within forty-eight hours under a treatment of opium with large doses of quinine, and steady improvement followed. The sound as a repositor has never been a very safe instrument.

APPLICATIONS TO THE CERVIX AND TO THE UTERINE CANAL.

CASE.—*Pelvic Pain and Inflammatory Symptoms Following an Application of Iodine to the Uterine Cavity.*—The patient, suffering from retroversion and chronic endometritis, had been for some three weeks under the care of Dr. Robinson; the uterus was movable, eaily restored, and kept in position by a tampon of cotton soaked in glycerine, and every six days an application of the compound tincture of iodine was made to the womb. Two or three hours after one of these applications the patient was seized with violent pelvic pains in region of the ovaries and the uterus; they were intense, but not accompanied by any decided evidences of inflammation, although there was some elevation of temperature, tenderness on pressure, nausea and vomiting. Within thirty-six hours the symptoms subsided upon the use of quinine, opium, and hot applications to the abdomen.

Dr. Paul F. Mundé, of New York, tells me that he has in two instances only, out of several thousand applications of iodine which he has made, seen cellulitis arise.

There are unfortunate results following the application of tincture of iodine to the cavity of the uterus. More surprising and more inexplicable still is the following case which occurred in the practice of Dr. Allen, and which serves well to caution us even in trifling applications, and in patients who have again and again undergone the same manipulation.

CASE.—*Peritonitis and Death in Consequence of an Application of Tincture of Iodine to the Cervix.*—Dr. J. M. Allen, of Liberty, Mo., gives the details of this instructive case as follows: "Mrs. C., æt. 23, of sound constitution, was delivered of her first child in March, 1856; she made a good recovery and enjoyed fair health until the following December, when symptoms of uterine disease began to appear. Examination revealed a slight ulceration about the os and a retroversion, seemingly the result of a chronic metritis.

"Local treatment was at once inaugurated and continued for a period of nine months; during this time various remedies were used, such as vaginal injections with sulphate of zinc, acetate of lead and tannin. Applications to the ulcerated portion of the cervix were made with nitrate of silver and dilute acid nitrate of mercury; the latter had a good effect, but was discontinued, and tincture of iodine substituted. The patient was rapidly inproving, both locally and constitutionally, when, after one of these applications of iodine to the cervix, which were made every two weeks, without entering the cervical canal, the patient was attacked with peritonitis, and soon died, without a known cause to account for the fatal issue."

INTRA-UTERINE INJECTIONS.

CASE.—*Death from Intra-Uterine Injection of Iodine made for the purpose of Checkinq Hæmorrhage.*—In the fall of 1866, Dr. E. H. Gregory was consulted by a lady some forty years of age, who suffered from frequent and profuse hæmorrhages. Examination revealed an intramural uterine fibroid, and he accordingly determined to dilate in order to satisfy himself whether or no it could be removed.

Sponge tents were used, and when the os was fully dilated, Dr. C. H. Pope was called in, and agreed with Dr. Gregory that the tumor was beyond the reach of surgical interference.

Intra-uterine injections had at that time been suggested and were frequently spoken of; Dr. Gregory decided to give his patient the benefit of this innovation, telling her of the attending dangers. When he called on the 8th of December, 1866, he found the weak, debilitated woman at the sewing-machine, an effort she could but rarely make. He took her into an adjoining room, placed her in dorsal decubitus, and through the speculum injected some two ounces of an iodine solution (tinct. iodidi 1: aq. 6) into the dilated cavity of the enlarged womb, using no force, the fluid returning easily; a moment later the patient, with pale and anxious face, raised herself into a sitting posture, and when advised to lie down, she fell back, gasped a few times, and expired, hardly five minutes after the injection had been made.

The coroner, Dr. Spiegelhalter, made the post-mortem examination in the presence of Drs. Gregory, Hogden, Pope and Maughs. No fluid was found in the peritoneal cavity, and the cavity of the uterus itself was stained so little that some doubted the fact that the fluid had even penetrated so far; death evidently resulted from shock. The intramural fibroid was beyond reach.

CASE.—*Metro-Peritonitis and Death Following an Intra-Uterine Injection of a warm and dilute solution of Tinct. Ferri Chloridi.*—Dr. Theophilus Parvin, of Indianapolis, relates a very similar case; his patient was a married lady some thirty-five years of age, sterile, who was suffering from hæmorrhage due to uterine fibroids, which she was known to have had for twenty years.

At the time Dr. Parvin was consulted, the hæmorrhage was violent and uncontrollable, persisting even after free dilatation of the cavity and tamponing of the *os uteri;* other means having failed he injected very freely into the uterus a warm solution of muriate tincture of iron, one part to seven of water; the patient at once fell into a collapse, which for half an hour was death-like; she rallied to die within less than a week of the metro-peritonitis which followed.

Dr. Skene, of Brooklyn, writes me that he has, in eleven cases, seen violent uterine colic and shock follow the careful injection, into the uterine cavity, of tincture of iodine, water, mild solutions of nitrate of silver, and in one instance a metritis, from which the patient was years in recovering, after an injection of less than ʒ ss—30 drops of equal parts of tincture of iodine and opium.

These cases are but a few of the many, and notwithstanding all that may be said to the contrary, the injection of fluid into the uterine cavity is a dangerous proceeding, and neither the double canula nor the syringe with guttern, or any of the other ingenious instruments which have been devised to facilitate the exit of the injected fluid, are sufficiently reliable in their action to make this method a safe one.

I entered upon my practice armed with all the various intra-uterine syringes, but their pistons have long since dried, although I have myself had no mishap as yet, and in former years I not unfrequently resorted to intra-uterine injections, especially with Braun's syringe.

A dilated os is a *sina qua non*, yet even with it, such notices as the following are not unusual: "Sudden death during the injection of perchloride of iron into the uterus; post partem hæmorrhage, uterus not contracted; injection of a solution of liquor ferri in water, 1 : 6, with a Higginson syringe. After one or two syringes full, slight discomfort; regardless of this a few more were injected, the patient cried out, grew ghastly pale, gasped for breath, became pulseless and died."—*Obstetrical Journal of Great Britain and Ireland*, Jan., 1880, page 633.

Fischer, of Madgeburg, in an inaugural thesis, which appeared in Halle a. S. in 1879, has compiled fifty-four published cases of alarming, as well as fatal, results following intra-uterine injections and analyses them carefully, though not with the best judgment.

It is the injection of the cavity of the undilated uterus which is fraught with danger, and which is uncalled for, since so many other equally efficacious and less dangerous methods of treatment have been devised. The injection of the puerperal uterus (post partem or post abortum), though not absolutely without risk, is so invaluable a remedy, be it the hot water in post partum hæmorrhage or the carbolized solutions in puerperal affections, that we must overlook the very slight dangers accompanying them; it is only against the injection of perchloride of iron for the relief of post partem hæmorrhage that I would protest, as very dangerous, and, if anything, less efficacious than the iron swab or the hot water douche.

VAGINAL INJECTIONS.

The dangers of intra-uterine injections all will allow; but now one word with regard to the dangers accompanying the use of the ordinary vaginal syringe in the position usually assumed.

Case. *Intense pulvic pain and threatened peritonitis following the use of a Davidson syringe.*—Mrs. E.T., a healthy brunette, twenty-four years of age, the mother of two children, consulted me in the fall of 1875 on account of a slight back ache and leucorrhoa. I found the womb somewhat retroverted and lowered in the pelvis, with an endocervicitis which hardly seemed to warrant local treatment ; I accordingly introduced a Hodge pessary and advised astringent injections, one-half teaspoonful of tannin to two cups of water, night and morning.

At that time I was not in the habit of giving careful instructions as to the method of making the injections.

This patient, as most all do, used a Davidson syringe, while sitting over a chamber. One evening, toward ten o'clock, I was hastily summoned by the excited husband. Mrs. T., while using the syringe, had been seized with a sudden and severe pain, a uterine colic, which was followed by intense suffering. I found my patient in great agony, the abdomen somewhat distended and exquisitively sensitive to the touch, most especially in the region of the uterus and the ovaries ; pulse rapid and small ; spasmodic increase of the pain. The subcutaneous injection of morph. sulph. gr. ⅙ gave but little relief. Hot applications to the abdomen and opium in ¼ gr. doses slowly overcame the pain, and after midnight she fell into a restless slumber. The following day she felt sore and remained quietly in bed. A speedy recovery followed.

Unquestionably a few drops of the injected fluid entered the uterus. Since this time I always close the central orifice of the vaginal nozzle, and direct the injection to be used in the recumbent or semi-recumbent position, as more comfortable for the patient, less tiresome, and more advantageous as securing a more thorough washing of cervix and vagina, which in this position can retain the fluid.

The habit of sitting or stooping over a vessel is exceedingly tiresome and trying, often indeed injurious, and at once neutralizes many of the good effects of the injection.

(I would refer to the excellent article on the subject by Dr. E. C. Dudley. of Chicago : The Hot Water Vaginal Douche ; Certain reasons why its use is generally followed by failure and disappointment.—*Chicago Medical Gazette*, January 5, 1880).

Case.—*Vaginal injection followed by severe metro-peritonitis ; imperfect recovery*,—The following case occurred in the practice of Dr. E. C. Evans, of Sedalia, Mo., some twelve years ago : A married lady, some thirty years of age, the mother of three children, had been using vaginal injections on account of a leucorrhoa, of her own accord ; no medicated fluid, simple warm water was injected, with a Mattison syringe, in the ordinary way, the patient seated over a chamber. While thus using the injection she was seized with an intense pain ; she threw up her hands and fell off the vessel on to the floor in a convulsion, in which condition she was found by Dr. Evans. The convulsions continued, with the patient in an unconscious condition, from that time, 9 P. M., until 10 o'clock the following morning. A violent metro-peritonitis followed, greatly endangering the life of the patient, and continuing for some ten days. She ultimately recovered, but has never been in robust health since, remaining almost an invalid in consequence of this unfortunate vaginal injection.

This case at once suggested to Dr. Evans the plugging of the central orifice of the nozzle, and since he has insisted on this he has not met with another accident.

These cases, which might unquestionably be duplicated again and again, will suffice to show that even so simple a proceeding as the use of the vaginal douche is not wholly free from dangor, and that it should be cautiously and judiciously employed.

In order to obviate the dangers and the discomforts arising from vaginal injections as ordinarily used, I advise my patients:

1. To plug the central opening of the vaginal attachment.
2. To assume the semi-recumbent, better the recumbent position, with knees drawn up.
3. Never to use a strong current, whether by the fountain or the bulb-syringe.

SPONGE TENTS.

CASE.—Peritonitis Following the use of Sponge Tents.—Mrs. John Miller, æt. 23, suffering from anteflexion and endocervicitis. I attended patient in September, 1873; began dilatation of the uterus on the 23d; on the 25th, whilst the uterus was well dilated by a large sponge tent, and whilst under strict orders to remain quietly in bed, this conscientious patient scrubbed the floors and went about the yard putting things to rights; consequently I found a diffuse peritonitis on the 26th. Although it yielded readily to treatment, she remained weak for some time afterwards, and but slowly recovered her strength.

CASE.—Death from the Use of Sponge Tents.—Dr. J. Taber Johnson, of Washington, D.C., writes: "About ten years ago I dilated a uterus preparatory to removing a fibroid before the class. I used three tents, one after the other, so as to approach the tumor more easily, with the third, metritis set in, peritonitis occurred, and in spite of the best treatment, with skillful and trained nursing, she passed hence. She had complete procidentia, the uterus havhaving fallen far down. The case seemed a simple one; the organ had undergone much rough usage; she constantly bruised it in walking and sitting; two operations had been performed on the vagina to retain the prolapse, and the perineum had been restored, all without any unfavorable reaction. After she had borne all these operations she succumbed to the simple use of a sponge tent."—*Death following the use of sponge tents.*—(*Am. Journal of Obstetrics*, August, 1874, p. 279).

At the meeting of the Philadelphia Obstetrical society on the 4th of December, 1873, Dr. De F. Willard exhibited the uterus of a woman who had died after the dilatation of cervix uteri by sponge tents. The patient had been married for eight years but had never become pregnant. Three sponge tents were used in succession; the last, a smaller one, was introduced on a Friday, and, contrary to orders, the patient worked the next day, Saturday, at the sewing machine; on Sunday morning she suffered extreme pain, abdominal tenderness, fever, etc., and on the ninth day she died. Peri-uterine cellulitis, then general peritonitis;

the parietal layer of the peritoneum was covered with lymph, and a small abscess existed on the left side of the uterus.

Dr. Ellwood Wilson reported an analogous case: on a Thursday he introduced a sponge tent for sterility and painful menstruation, and another on Saturday morning, which he left until Sunday morning. She seemed so well that he gave her permission to go down stairs; she, however, not only did this, but in the evening went to church. In the night she had a chill—on Monday peritonitis set in—on Tuesday she died.

Dr. H. Lenox Hodge had also seen a fatal case: The first tent was introduced on Saturday; the second and third on Sunday and Monday; before the removal of the last she complained of acute abdominal pain, and died of peritonitis four days after. An autopsy revealed a double ovarian tumor.

Dr. Albert H. Smith reports a death on the third day following the use of the scoop after dilatation by sponge tents. He never hesitates to use tents, even in his office; the great danger is from their repeated use. He does not hesitate to use a second tent, but fears a third.

Dr. Goodell had one case of death to record following the use of three sponge tents in a case of intramural tumor, which was manipulated by a number of physicians who were present.

Every gynæcologist, the ablest and most skilled, has seen dangerous and fatal results following the use of sponge tents; thus Dr. Parvin says: "Sponge tents have occasionally given me great anxiety, as severe peri-uterine inflammation followed their use, and twice this inflammation terminated in abscess, but never in death." Dr. Skene has seen cellutitis in three instances, and Dr. M. A. Pallen, of New York, in one hundred and fifty cases in which he used tents, saw two deaths from metro-peritonitis, sixteen cases of pelvic cellulitis and one of metritis with abscess.—(Pallen, Incision and Division of the Cervix Uteri, *Am. Journal oj Obst.*, July, 1877, p. 364).

Dr. Mundè, of New York, informs me that he has twice seen acute paro-varitis follow the use of laminaria tents.

Dr. T. G. Thomas tells me of four deaths, in his practice, from the use of sponge tents; and Dr. J. R. Chadwick of one death following the use of a tupelo tent to facilitate conception in a sterile woman.

This of course is only the experience of a few of the busiest gynæcologists who have so frankly and so kindly given me the history of their mishaps that they may serve as a caution to others. The most instructive case, however, the one which conveys the most pointed warning, is one which occurred in the practice of Dr. Emmet, and I will quote the words of his letter: " . . . . I have a fellow-feeling for you, as I have recently lost a patient from peritonitis, brought on by her own imprudence, after the use of a sponge tent; contrary to orders, she got up and walked about in her bare feet. . . . My care after the use of sponge tents has frequently been ridiculed, and by men who do not hesitate to introduce them in their offices and then allow the patient to return home. I keep such cases in bed and place them in charge of a nurse, so that they cannot commit any imprudence, and yet I cannot always guard against the danger. This very case which died was guarded by the nurse, ordered to lie quietly in bed, and told the consequences of any imprudence. Notwithstanding all this, during a few moments, when the nurse was obliged to be absent from the room, this patient got up, and in her bare feet walked over an oil-cloth into the adjoining room; that very night she had a chill, and in less than a week she died from the intense peritonitis which followed."

Tents, whether sponge or laminaria, must be used with the greatest care, and the following points strictly observed:

1. The patient must remain quietly in bed during the entire period.

2. Rapid dilatation should be employed, and if possible not more than two tents used, the tents only remaining until fully expanded.

3. Warm, cleansing, or disinfecting injections must be used by the patient in her bed, and the uterine cavity must be cleansed by the physician before the introduction of every tent.

It has been my custom to begin with the insertion of a slippery elm tent; upon the following day I have stretched the canal moderately with the dilator and forced in the largest possible sponge tent, which I could generally follow by the largest size in twelve hours. Unless it be an imprudence, it is generally the third tent which does the mischief.

Goodell, in his usual happy vein, explains this: "The mischief is done, not by the first tent, or the first batch of tents passed into the cervical canal, but by those put in at a second or third visit; the first tent irritates and congests the cervix; its removal abrades the mucous coat, and from this raw surface is absorbed the fetid discharge or the septic material generated by the succeeding tents."

DANGERS OF THE MOST TRIVIAL OPERATIONS UPON THE UTERUS.

Care and cleanliness, if not Listerism, are necessary in even the most trifling uterine operations, and the strictest surveillance should be exercised over the patient during the after-treatment, even if this consist in nothing more than rest—absolute rest and cleanliness. This is all the more necessary, as a patient, after a slight operation, may suffer neither fever nor pain; on the contrary, the happy effect of the operation may already have shown itself—she is free from all annoying aches and pains of which she complained before the operation, and considers herself accordingly well and at liberty to move about as she pleases.

I have always given my patients the strictest injunctions in this respect, and once have I seen death follow disobedience of these apparently ridiculously strict orders, and once I almost lost a patient from a trifling exposure caused by a change of weather which I had not anticipated.

It has afforded me great satisfaction to see my apparently extreme views so thoroughly corroborated by a gentleman of Dr. Emmet's experience, who, in a recently received letter, says: "When I operated in the hotels and boarding-houses, I frequently lost patients from the most trifling operations, as I could not guard against their own acts of imprudenc. This led me to operate only in my private hospital, where I could take every care, and have the patient watched; the result has been most satisfactory."

Rest and careful attention during the after-treatment are extremely important features, and yet, with all care, dangerous and fatal results may occur. Very few of the text-books which you may consult before attempting an operation will tell you anything of its dangers, unless it be an ovariotomy or a similarly serious undertaking. They will tell you how to operate, but will not detail the minute precautions to be observed in the operation, or counsel you how careful to be of the patient after she has been operated on, as she ceases to be an object of interest when once the aspiring surgeon has cut.

I have called attention to the necessity of cleanliness, if not of Listerism, during the operation, and of rest after it, but must add that among the most important precautions, before even engaging in the operation, is the exclusion of septic influences in the widest possible sense of the word. It is not only dangerous for the surgeon to operate if he himself is in attendance upon a case of puerperal or other septic fever, but he even takes a great risk if he operates during the prevalence of such an epidemic, most so in the spring of the year ; such at least has been my experience.

It was in March and April, 1880, that I lost a patient from puerperal septicæmia, without any apparent infection, and that those two simple operations, Cases XIV. and XVI., resulted so badly. Others have made the same observation. Thus Dr. Emmet writes me : "I have had trouble from the most simple operations, and particularly in the spring of the year, if there is much puerperal fever." Dr. Marcy, of Cambridge, writes : "We have had an unfortunate epidemic influence in our vicinity this last spring (1880), so pronounced that several of us for some weeks gave up all the surgery possible."

Dr. Baker, of Boston, says that at this same time he lost his own case, and that he understands that Dr. C. B. Porter lost a case from operation for rupture of the perineum, in the Massachusetts General Hospital : "At that time many obstetricians were complaining of the hard getting up of their cases, and I consequently suspended all operations, as well as the the use of tents, both in hospital and private practice, for six weeks, when I was informed by the Board of Health that the hygienic condition of the city was again good."

It is this hygienic condition, dependent upon certain atmospheric or telluric influences, which we must take into consideration, as well as the danger from direct personal infection.

Men are in the habit of reporting their successes, not their failures ; and even Hegar, the skillful German surgeon, quietly buried his first case of extirpation of the ovaries, thus leaving to the bold and successful American, Robert Battey, the credit of the new operation which now bears his name. Not until Battey had published a series of successful cases did Hegar operate again, and then he claimed that fatal case, which he first sought to hush, that it might now give him preceeence. So all do. Porro would probably never have claimed his operation had his patient died; he would not have told of his experiment any more than Hegar did.

The more desperate the operation, if successful, the more ready is the surgeon to report it ; these successful cases make up the medical literature of the day ; of failures or of fatal results we hear but little, certainly not in minor operations ; and such wonderful results are achieved in this present era of antiseptic surgery that every practitioner deems himself justified in a free and often careless resort to the knife, the curette, and especially the less dangerous instruments, which accordingly often prove to be instruments of death.

SCARIFICATION OF THE CERVIX.

CASE. Death in consequence of scarificationof the cervix.—As the simplest of all operations in which the knife is used we may certainly regard the scarifying of the cervix, and this unfortunate result, which followed so trivial an operation at the hands of so able and skillful a man as Dr. Parvin, of Indianapolis, may well be a warning to all. To use Dr. Parvin's own words:

"The patient was a delicate lady, twenty-four years of age, married, but sterile; she suffered from chronic metritis, with scanty and painful menstruation. I scarified three or four times with marked benefit, and so favorable was the result, that I did it once too often; within thirty-six hours of my last scarification a peritonitis set in which marched rapidly to a fatal issue."

How is this case to be explained ?

INCISION OF THE EXTERNAL OS.

CASE.—Death from pelvic cellulitis and general peritonitis in consequence of exposure, five days after a slight bilateral incision of the external os.—M. M., æt. 26, servant, had suffered for many years more or less from back-ache and dysmenorrhœa, in consequence of endo-cervicitis in an anteflexed uterus with pin-hole os; had been treated off and on by various physicians, but without receiving more than a temporary benefit; rest gave her the greatest relief, but as soon as this otherwise strong and healthy woman resumed work the back-ache, ovarian pain, etc., returned.

I had proposed to enlarge the external os by bilateral incision, in order to open the uterine cavity, to enable me to resort to local applications, as well as to permit the free escape of the menstrual fluid.

The operation was performed with the assistance of Dr. Evers, at the Women's Hospital, on the 3d of December, 1879, five days after cessation of the menstrual flow; I made a trifling bilateral incision, cleansed the wound with hot water, inserted iron cotton to distend it, and kept this in place with a cotton tampon.

The patient suffered some little discomfort from the tampon, which disappeared upon its partial removal on the following day; she did very well, had no pain, and no febrile reaction whatever ; December 6th, the iron cotton was changed and a carbolized wash used; the strictest orders were given that the patient should remain in bed, and not even sit up in her bed; but on the fifth day after the operation, whilst the nurse and other patients had left the ward, she quickly got up to have a wash; unfortunately she found no fresh water in the pitcher, so, in her slippers and dressing-gown, this patient, who had been ordered to keep to her bed, went out into the yard to pump water for herself, then she had a nice wash, and in the afternoon a severe chill—high fever all night. On the following day, Tuesday, December 9th, I found her suffering intensely from a well-developed pelvi-peritonitis, which, however, yielded in a few days to an energetic treatment of opium, quinine, and constant hot applications; cotton was removed from the incision and occasional injections of hot carbolized water seemed to afford comfort.

December 13th, fever and pain had disappeared, she rested easily, and began to take nourishment; improved rapidly, nothing to complain of; on the 16th we were obliged to remove her to her home, over one mile distant, as the hospital was given up. The weather was pleasant, and she was carefully wrapped up and taken home in a carriage; the driver, contrary to orders, seems to have driven at a sharp trot over the rough, recently frozen ground; she was a good deal jolted, and I was soon summoned to find her in a worse condition than before. General peritonitis supervened upon a violent parametritis; leeches only afforded the relief which was no longer to be obtained by opium or by morphine injections; quinine was vomited, but retained by the rectum. Dr. Hodgen kindly saw the patient with me several times, but notwithstanding all that could be done, she died on the 22d of December, nineteen days after a trifling operation, which many would perform on an office patient, a victim to her own imprudence.

CASE.—Death in consequence of a slight incision of the posterior lip. Related by Dr. J. Taber Johnson, of Washington, D. C.—"Patient was a multipara, who had not borne a child for ten years, and suffered from terribly painful menstruation. Diagnosis, hypertrophic elongation of the cervix and conical-pin-hole os. She declared that each period was more painful than the birth of a child. One of our best surgeons saw her with me, and we determined to amputate the cervix, but as *she was too near her period*, this operation was necessarily delayed, and by way of encouragement, to show her how much good would result from even a very small operation, we merely incised the posterior lip of the cervix, and only part of the way through at that. On the following day I passed a small black French bougie so as to keep the wound open ; neither the operation nor the bougie gave her any pain ; the next day she had chill after chill, and to make a long story short, inflammation then travelled rapidly upwards, involving one portion of the uterus and peritoneum after another, until this unfortunate woman had general peritonitis in addition to the pelvic cellulitis. I attended her faithfully for about four months, many times twice daily ; with careful attention and skillful nursing she slowly recovered."

Dr. Goodell, of Philadelphia, has had a death from an almost equally simple operation, a posterior section of the cervix.

Barring the numerous fatal cases from the once so frequently performed bilateral incision, I can now hear of none beyond those done in office practice, and accidents in consequence of Sims' antero-posterior section seem still more rare, probably as this has been regarded as a more serious operation, and operators have, as a rule, followed the careful directions of Dr. Sims ; no accidents at least have been reported to me in consequence of this operation by anyone but Dr. Sims himself, who says: "I have lost two cases from incision of the cervix uteri, both of which have been published." These he has fully discussed in Vol. III. of the Transactions of the American Gynæcological Society, in his article on Treatment of Stenosis of the Cervix Uteri, p. 54.

Dr. M. A. Pallen, of New York, publishes two deaths from incision of the cervix uteri in his paper on Incision and Division of the Cervix Uteri for Dysmenorrhœa. *American Journal of Obstetrics*, July, 1877, p. 364.

Dr. Thomas says that he has several times seen peritonitis or cellulitis follow section of the cervical canal, but never death.

OPERATION FOR LACERATION OF THE CERVIX.

CASE.—Death from general peritonitis following operation for a slight unilateral laceration of the cervix.—Mrs. H. R., from Tennessee, æt. 26, suffered from backache, ovarian pain and general weakness in consequence of a slight left lateral laceration of the cervix uteri; was unequal to any exertion, a short walk or an attempt at work increased pains excessively; the uterus was movable, still somewhat enlarged, but in much better condition than when I last saw the patient in March, 1879, she having undergone a very thorough preparatory treatment at the hands of Dr. Thompson, her attending physician. The menstrual flow ceased on the 15th of March, 1880, but vaginal douches were used and the bowels freely moved; six days later, on the 21st, I operated with the assistance of Drs. Holland, Hypes, Schenck, Nelson and Thompson, of Tennessee. The operation was a trifling one, borne well with chloroform, performed under the douche of hot carbolized water, four silver sutures were introduced. No reaction whatever followed; pulse and temperature remained normal; a few hot water injections removed the slight discomfort caused by the sutures on the third and fourth days; she was impatient to leave the bed as she felt completely cured. It was indeed remarkable how all former symptoms suddenly disappeared after the operation, ovarian pain and backache were gone, in short, as she expressed it, she felt "as if she had a new back."

March 28th, the sutures were removed on the seventh day, but only partial union had taken place, the lateral half or two-thirds having united, and there was a slight return of former symptoms upon removal of the sutures. I determined to pare the edges again and repeat the operation; I considered this a proper course to pursue, as there was no uterine tenderness whatsoever, no enlargement, nothing pointing to an inflammatory condition. The menstrual flow was not expected for five or six days and she would not wait until this had passed over; if she were to undergo a second operation, it must be done at once. I accordingly operated on the 3d of April, with the assistance of Drs. Holland, Hypes and Thompson, observing the same precautions as before, three sutures served to unite the wound.

Intense pain followed the operation, and this steadily increased, fever soon came on, vomiting, abdominal tenderness told of a severe general peritonitis, to which she succumbed on the morning of the 8th, not quite five days after this slight operation.

The menstrual flow appeared unexpectedly and prematurely on the 5th. Hot applications and morphine subcutaneously afforded her relief, but quinine, per rectum and subcutaneously, could not stay the fatal course of the disease.

The patient was under the constant care of Dr. Thompson, and was seen in consultation by Drs. Hodgen and Prewitt; and although not one could detect any symptoms of septicæmia, I would mention that three weeks before I had lost a patient of puerperal septicæmia in the same hospital.

The first and successful operation was performed two days after this death —recklessly, I will acknowledge; but as this operation passed off so well, I deemed myself perfectly safe in attempting a second one so much later. Did this fatal accident result from the infected atmosphere of the building, or from the proximity of the menstrual congestion, or from a trifling incident which has escaped my memory? As my own vulsellum forceps had been loaned to a fellow-practitioner, I made use of an old rusty pair which I found in the hospital. Could these have been the cause of the infection?

The post-mortem revealed a general peritonitis; the sexual organs in a healthy condition, and apparently not the source of the inflammation. What was the cause of this unexpected result?

CASE.—Death from septo-pyæmia nine days after an operation for extensive bilateral laceration of the cervix.—Dr. W. H. Baker, of Boston, writes me: "About ten days after I had lost one of my ovariotomy cases from septic peritonitis, I operated for an extensive bilateral laceration of the cervix in a widow fifty-nine years of age, with nearly complete procidentia. My reason for operating was, that when the uterus was replaced within the vagina, and any means of supporting it there were used, such appliances tended to separate the lips of the cervix, and caused much irritation. It was then simply in order to make it possible to adjust a pessary without irritation that I did the operation. She had ceased menstruating entirely one year before, and when the operation was done, there seemed to be so little vascularity to the parts that I was almost led to question whether they possessed sufficient activity to insure union. She died of septo-pyæmia in nine days."

CASE.—Death from general peritonitis four days after operation for an extensive stellated laceration of the cervix.—Dr. H. O. Marcy, of Cambridge, Mass., operated on a delicate anæmic lady of twenty-six, who had had a severe delivery four years before, and had not been well since; profuse menstruation, leucorrhœa, backache, etc. April 12th the edges were pared and united by six silver sutures; was comfortable without opiates until the following afternoon, when slight pelvic pain began to appear; restless during the night of the 13th, although opium was used freely; temperature still normal. The first and only chill appeared on the 14th, when pulse and temperature began to rise; at noon she was decidedly worse; pains were intense, and by evening the countenance assumed a pinched expression; she was delirious and unconscious; 15th, slowly sinking, peritonitis well developed, urine highly albuminous, containing abundant granular casts; 16th, 10 A. M., temperature 107°, pulse 160, unconscious; temperature reduced to 104° and below, thirst relieved by ice, etc.; yet at 4 P. M. she died.

The post-mortem examination showed uterus and ovaries normal, but the pelvis filled with pus; acute parenchymatous nephritis and general peritonitis existed, and the intestines were firmly agglutinated—a condition similar to the one in my case, where the peritonitis was, however, less violent, and no nephritis existed.

Dr. Marcy deemed himself "surgically clean" at the time of the operation, and used no other antiseptic precautions than carbolized vaginal injections every three or four hours during the first two days.

These cases will suffice to demonstrate that this operation, which has been so recently given to us, and which has already proved so great a blessing, is not without its dangers, and demands that the operator carry out in detail all the precautions recommended by its originator in his valuable work; and even then fatal results will surprise us.

THE CURETTE.

CASE.—Pelvic peritonitis in consequence of exposure four days after curetting.—Miss M. M., æt. 21, a young lady of good constitution, who had always enjoyed unusually good health, free from all the ordinary female complaints; was annoyed by a slight discharge from the vagina, which she had noticed since the fall of 1878. The brownish-yellow discharge, though not troublesome, was sufficient to slightly stain her clothing, and she was anxious to be rid of it. I was consulted in July, 1879; finding an erosion around the os, and some little congestion of the cervix and the vaginal walls, I made a single application and advised astringent injections. These were continued for months without any apparent benefit beyond the cure of the erosion.

Determined to relieve my patient from this, though trifling annoyance, which was evidently due to a congested or hypertrophic condition of the uterine mucosa, I treated her in January and February, 1880, with local applications, also to no purpose. Determined to discover and to remove the cause of the trouble, I finally concluded to dilate and examine the uterine cavity. I accordingly introduced a sponge tent on the 8th of March, followed by a second larger one on the 9th, and on the 10th examined the cavity with Thomas' wire loop, and the soft, velvety feel showed me a thickening of the mucosa. I removed a considerable portion with Simon's (sharp spoon) curette; then made an application of iron to the cavity; pain soon ceased, and when I visited the patient on the 12th, two days after the operation, found her quite comfortable. I made another application of iron, and advised hot astringent injections. I neglected to direct *how* they were to be taken; and, as my patient felt perfectly comfortable and well, she got out of bed, walked in her stocking feet to the stove, and there took her injection.

The weather was raw, and a disagreeably-cold west wind blowing; the room was a very large one, with a southern exposure, with three large windows and two doors—one into a cold room, the other into a cold hall; close by this hall door, through the cracks of which blew a perfect gale, was my patient's bed, and as she got up, put on her stockings and walked to the stove, she was constantly in a cold draft. On the morning of the 14th, after taking her injection, she began to feel chilly and to complain of cold feet; on the next day I found her in high fever, with abdominal tenderness. A severe chill followed in the night, and on the 16th, notwithstanding all measures resorted to, a severe pelvic peritonitis had fully developed; the stomach rejected both food and medicine, the pulse ranged between 130 and 140, and for three or four days the worst was to be feared. A good constitution and careful nursing finally turned the tide, and a young life was saved, which had come so near falling a victim to a trifling carelessness some days after a slight operation on the uterus.

Dr. P. F. Mundè informs me that he has had a case of cellulitis after dull curetting, and Dr. Skene, that one of his patients died of peritonitis after the use of Sims' curette employed to remove polypoid growths.

The sharp spoon, as well as that apparently very harmless, dull curette, must be handled with the same care as the more formidable instruments.

REMOVAL OF SMALL PEDUNCULATED POLYPI FROM THE UTERINE CAVITY.

CASE.—Death in consequence of the removal, with the scissors, of a small pedunculated polypus from the cervical canal.—Mrs. ———, æt. 48, the mother of seven children (the youngest of whom was 8 or or 10 years of age), none of whom very young, had for over a year suffered more or less from uterine hæmorrhages; flooding, not only during menstrual period, but also at other times.

An alarming hæmorrhage, more profuse than usual, induced her to send for Dr. H. H. Mudd, who found his patient very feeble, pale and anæmic; the cervix was normal, not unusually soft or thickened; the os small, not patulous, no ulceration or protruding tumor, nothing to account for the hæmorrhages.

Dr. Mudd dilated with laminaria, but still unable to detect any abnormality, inserted a sponge tent in order to thoroughly explore the cavity. Examination now revealed a small polyp, not over five-eighths of an inch in length, attached by a slender pedicle not one-eighth of an inch in diameter, a little below the internal os; this was easily *snipped off with the scissors*, giving no pain and causing no bleeding, nor had the dilation by laminaria and sponge tents caused any suffering. There was no evidence of any disturbance until perhaps thirty-six hours after the removal of this small growth. Dr. Mudd operated Saturday afternoon or Sunday morning; on Monday morning an alarming chill came on, this was followed by a high fever, nausea and vomiting, and thirty-six hours later, on Wednesday morning, the patient died, three days after the removal of a small fibroid with thread-like pedicle—and I would call especial attention to the fact that in this case the pedicle was cut with the scissors, and not twisted off with the forceps.

CASE.—Death from removal of a small, pea-sized polypus from the cervix three days before the appearance of the menstrual flow.—A lady, 35 years of age, unmarried, apparently in delicate health, consulted Dr. Wm. L. Barrett, of St. Louis, on account of a menorrhagia which had existed for some time, but was becoming very serious of late. Examination revealed a small fibroid growth, no larger than a pea, not pedunculated, and attached to the lining membrane of the cervical canal just within the external os, and a subserous fibroid of the size of a hazlenut in the fundus. As the removal of the small polypus was so very trivial an operation, and the patient, who came from the interior of the State, was exceedingly anxious to be operated upon, Dr. Barrett at once twisted off this little excrescence with the dressing forceps, though knowing that the menses were expected in a few days. The point of attachment was touched with Churchill's iodine, perhaps the greater part of the cervical canal; but the cavity of the uterus was certainly not entered. Every precaution was taken, the patient was kept in bed after this trifling, painless and bloodless operation, the vagina thoroughly cleansed by repeated washing, and everything went well for two or three days, when the menstrual flow appeared; with it came a pelvi-peritonitis which, notwithstanding the greatest care and attention, resulted in a general peritonitis, which proved fatal within five or six days.

A post-mortem examination was made, and this established the fact that the difficulty had originated in an endometritis which passed through the Fallopian tubes to the ovaries, which were enlarged and congested; from this point the inflammation had extended over the entire peritonlum.

CASE.—Peritonitis and death following the removal, with the dressing forceps, of a small mucous polypus from the fundus uteri.—For a brief time the fair name of so skilled and so careful a man as Dr. Emmet was attacked by envious and malicious men, and by the friends of an unfortunate girl, on account of one of these almost inexplicable accidents, as he tells me; to use his own words: "Some sixteen years ago a single lady, about twenty-two years of age, and apparently in perfect health, but suffering from an intensely painful menstruation, which had existed for the past eighteen months, consulted me as to the propriety of marriage, fearing sterility.

"Upon my first examination I found an anteflexion of the body of the uterus with an ill-defined thickening in the left side of the fundus, which I regarded as of little importance from its limited size. I advised division of the cervix backward, as was then my practice. I *now* know that the flexion, as well as the dysmenorrhea, must have been caused by an old cellulitis which obstructed the circulation, and had the crevix been divided a fresh attack of the inflammation must have appeared.

"At a second examination in my private hospital I felt a small sized mucous polypus, about the size of a large pea, projecting from the os. Without any especial preparation or thought as to the consequences, I introduced a Sims' speculum and, with a pair of forceps, pulled the growth away. The operation caused neither bleeding nor pain, and I expected to have divided the cervix on the following day; but in the night she had a violent chill followed by cellulitis, and then general peritonitis, from which she died within five or six days.

"This case is forcibly impressed upon my recollection, yet I did not fully appreciate the cause and effect for years after, nor did I do so until I had several cases of cellulitis following equally slight causes."

Dr. Chadwick, of Boston, has had one death in consequence of the removal of a fibroid polypus from the cervical canal.

These cases clearly demonstrate the danger of hastily attacking these simple little growths which sorely tempt the surgeon and give promise of becoming such yielding and easy victims. They should never be simply twisted off; the uterine canal should be dilated, at least cleansed, the pedicle cut off with the scissors, and, with the observance of the greatest cleanliness, the stump should be cauterized with nitrate of silver, with tincture of iron or with iodine, as Emmet suggests, and the patient sent to bed.

Dr. Emmet, guided by his experience, gives a graphic description, on page 616 of his second edition, where he says: "The natural impulse is to tear the growth away; this can be readily done, but if force be used an attack of cellulitis will be more likely to result than after the removal even of a large pedunculated polypus. I have had cellulitis occur several times from twisting off such a growth. There certainly exists a closer relation between the mucous membrane of the vagina, the uterine canal, and the peritoneum and connective tissue of the pelvis than is generally supposed."

The danger seems to me to spring less from the use of force than from the transmission and absorption of inflammatory and septic products by a lacerated stump.

PERINEORRHAPHY.

CASE.—Death in consequence of trifling operations for lacerated perineum in the practice of Dr. E. H. Gregory.—The most striking of these was that of a lady twenty-two years of age, who had received a slight rupture during the birth of her first child. She was in excellent health, and did not suffer from the trifling laceration, but it was deemed best to repair the injury; Dr. Gregory accordingly operated two or three months after childbirth, with the assistance of Drs. Pollak, Moses, and Carson. The operation was a very simple one, hardly more than a single square inch of tissue being denuded. Twelve hours after the operation the temperature rose to 100°, and on the fifth day this young, healthy and beautiful woman was placed in her coffin.

CASE. — Another similar case was that of a lady of thirty, the mother of several children, upon whom Dr. Gregory operated for laceration of the perineum, some two months after confinement, in the presence of Drs. Hodgen and Lemoine. A fever greatly resembling a urethral fever made its appearance soon after the operation and terminated fatally in less than a week.

I am informed that a similar case, death from operation for laceration of the perineum, about six weeks after confinement, occurred in the service of Dr. C. B. Porter, at the Massachusetts General Hospital in Boston.

Fortunately, before returning proof, I have received a detailed report of this case from Dr. Porter, through the kind offices of Dr. C. W. Cooper, to whom I am under obligations for services kindly rendered.

CASE.--Death from septicæmia sixty-six hours after perineorrhaphy.—Mrs. W., æt. 23, quite fleshy and apparently healthy, entered the Massachusetts General Hospital March 24, 1880, four months after having been delivered of her first child, weighing twelve pounds.

March 25th, the rupture, which extended half an inch into the rectum, was successfully closed by Dr. Porter; three deep wire sutures serving to unite the perineal body, whilst the mucous membrane of the rectum was adapted by cat-gut, and that of the vagina by fine wire sutures, which were also used between the deep ones.

Upon the following day the patient was comfortable, and retained some liquid food, although she began to vomit.

March 27th the patient was very restless, and the abdomen tympanic and largely distended; at 1:30 P. M., feverish; temperature after sponge bath, 101°; pulse and respiration increased, but not alarmingly. Later in the evening a decided change took place; the upper extremities were cold, and the pulse very rapid and feeble; the patient now failed rapidly, and notwithstanding all care died at 5:30 A. M., on the 28th—less than three days after the operation.

During the entire sickness patient could retain almost nothing on her stomach.

Post-mortem examination, twenty-eight hours after death, showed the surface of the wound grayish, not united, but the neighboring parts apparently healthy; there were no evidences whatsoever of peritonitis, and no pathological appearances beyond a cloudy swelling of the liver and kidneys.

Septicæmia was assigned as cause of death.

Dr. T. G. Thomas tells me that he has had a death from perineorrhaphy in a simple case of partial rupture.

These last mentioned cases I have referred to as they indicate the danger which attends any interference with the female sexual organs, even remote from the uterus, to which most abused organ I had intended to confine my remarks. I will not enter upon such operations upon the uterus as seem to be even somewhat serious or of more than slight importance; thus I do not refer to the antero-posterior section, to the amputation of the cervix, and especially the unfortunately frequent, yet rarely fatal, opening of the peritoneum by the ecraseur in this operation. To all such rather more difficult or important (yet in themselves not dangerous) operations I shall make no reference, although a number of fatal cases have been reported to me.

I am greatly indebted to kind friends

for the encouragement I have received from them, and for the valuable assistance they so cheerfully gave me in placing at my disposal the unfortunate, and hence to others most valuable, cases in their rich experience. I am all the more thankful to them as the information I asked for relates to those cases which many of our professional brethren would prefer to ignore. The profession, I am confident, will join me in expressions of gratitude to those unselfish men.—*Monograph.*

ABSTRACT DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."

TYPHOID FEVER.—From the first the patient should be restricted to liquid diet, with farinaceous food, and bread in some form if the appetite requires it. It is better to vary the broths, and to add to them some strong essence of vegetables. The value of milk as an article of diet in fever is generally admitted, but it requires to be given with caution. The indiscriminate employment of milk in almost unlimited quantities as diet in fever has led to serious troubles. Milk contains a large amount of solid animal food. The casein of the milk has to pass into a solid form before digestion can take place. Curds form in the stomach, and, the digestive powers being weakened in fever, these curds may remain unchanged in the stomach, and produce considerable disturbance of system. Sleeplessness is a more important symptom, for although it also usually disappears or diminishes spontaneously during the second week of the disease, still this is not invariably the case; and the nervous system may be greatly worn by the want of sleep, lasting, as it does occasionally, unless treated, night and day. The drugs I employ when, from the continued sleeplessness, it seems absolutely necessary to relieve it, are henbane, bromide of potassium, and chloral. From a combination of the latter I have seen very good results, and, so far as my experience has gone, no really ill effects when its use has been limited to the earlier stages of the disease—*i. e.*. to the period anterior to signs of nervous prostration. If the patient's temperature be high, a tepid bath, or sponging the surface will often at once induce sleep, and no drug be required. In the earlier and also in the latter stages of typhoid fever the sleeplessness has been treated by opiates. Experience has convinced me that although, in some cases, opium in sufficient dose to secure sleep has afforded relief, it is on the whole a most dangerous remedy. When the stools are strongly alkaline, diluted sulphuric acid sometimes affords marked relief. When the stools are merely frequent, four ounces of starch water thrown into the rectum night and morning will often check the frequent action. Should this not prove efficacious, from three to ten drops of laudanum in one ounce and a half of starch water may be thrown into the bowel night and morning *after* the passage of the stool. Carbonate of bismuth, in twenty-grain doses every four or six hours, is one of the best remedies I know for the cartarrhal inflammation of the bowel itself.—*Sir W. Jenner.*

COLD BATHS IN TYPHOID FEVER.—The treatment of typhoid fever by cold baths, when the temperature reaches 104°, or even less, is very generally adopted in Germany; but neither my own limited experience, nor the evidence adduced by others in its favor, has carried conviction to my mind of its advantage. At the same time I entertain no doubt that the direct cooling of the body is in some cases essential to the preservation of the life of the patient—gives him, so to say, his only chance of recovery ; while in others it alleviates the severity of a symptom which increases the danger of the patient. A certain degree of elevation of the body is incompatible with the favorable progress of the case. Thus a temperature of 106°, rising to 107°, and still advancing, will, unless lowered by treatment, speedily end the life of the patient ; for these fortunately very rare cases the direct and rapid depression of the patient's temperature by the cold bath is essential—is the only source of hope. Again, a temperature of 105°, if continuous for forty-eight hours, or broken only by a slight fall of short duration, may itself, by the degenerative changes it favors or produces in the heart and other organs, cause the fatal termination : for these cases a tepid bath gradually cooled down is sufficient to bring down the temperature ; the bath has to be repeated as the temperature rises.—*Sir W. Jenner.*

Hysteria in Childhood.—By H. SMIDT.

In a recent work, Smidt passes in review the numerous works written on this subject, and remarks that while gynæcologists are almost unanimous that this affection exists in childhood, the majority of works devoted to the pathology of childhood preserve an almost complete silence on the subject. He reports the following four cases, two of which are drawn from the Polyclinic of Strasburg :

Case First.—A young girl, seven years of age, was seized by an hysterical aphonia, which a single introduction of the laryngoscope alone, in the back of the mouth, sufficed to cure.

Case Second.—A young girl, thirteen years of age, who had not yet menstruated, found it absolutely impossible to swallow. The cauterization of the œsophagus, practised a single time, sufficed to ensure a complete recovery.

Case Third.—A young girl, nine years old, anæmic and badly nourished, was seized by hysteria, presenting psychical and convulsive symptoms, but which failed to yield to any treatment whatsoever.

Case Fourth.—A young girl, nine years of age, was attacked by an hysterical contracture, from which she completely recovered under the influence of moral treatment alone.

From these cases he claims that there is no doubt about the existence of hysteria in childhood. The affection is, however, very rare. Of twelve hundred children coming under observation at the polyclinic at Strasburg, he found but the two cases given above. As predisposing causes of the affection, Smidt found anæmia, chlorosis, and the inheritance of neurotic tendencies, to play an important part. Almost all the hysterical symptoms in childhood were characterized by their rather fixed character, the disease not having among them that proteiform character which it presents in adults.

Moral treatment alone often suffices to remove the disease, but the general physical condition of the child requires examination and treatment to ensure prompt recovery.—*Jahrbucher fur Kinderheilkunde.*

Facial Neuralgia Twice Cured by Application of the Constant Current.
R. WEISE.

Dr. Weise was attacked, in December, 1866, by a violent coryza, followed by a right sub-orbital neuralgia, which assumed an intermittent type, presenting daily exacerbations, followed by profuse perspiration, on the fifth of January, 1867, there being at the same time enlargement of the spleen; but the use of arsenic and quinine failed to have any effect on the disease, although used till January 17.

On that day Hitzig applied the constant current (eight elements), the positive pole being placed on the sub-orbital frænum, the negative pole on the nape of the neck. Amelioration rapidly followed, after the application of the electrodes, and at the end of the sitting, which lasted but three minutes, the neuralgia was completely cured.

It did not return until the eighth of May, 1879, showing itself, as in the previous attack, at eight o'clock in the morning; but the pain was not very violent until from four o'clock in the afternoon till nine o'clock at night.

The following day the neuralgia did not appear. On the 10th, however, there was a reproduction of the pain of the 8th. On the 11th the neuralgia did not appear, but the 12th was marked by the violent pain noticeable on the 8th and 10th. Up to this time Dr. Weise had not had recourse to medication; but now, believing himself the victim of intermittent fever, he took fifteen grains of chlorhydrate of quinine without effect, for in the morning of the 14th, at eight o'clock, the neuralgia again made its appearance in its most violent form. At ten and a-half o'clock the constant current was applied as before, followed, as on the preceding occasion, by almost immediate relief. At the end of two minutes the sitting had to be concluded, as the Doctor was troubled with slight vertigo. The fresh air soon removed this, and by twelve o'clock the neuralgia had disappeared. —*Berlin Klinische Wochenschrift.*

ABNORMALLY HIGH TEMPERATURES.—The following points seem now to be clearly established: 1. Temperatures above the degree formerly supposed to be necessarily fatal do sometimes occur without a fatal issue; nay, even without extreme peril to life. 2. Such exceptional and excessive temperatures as a rule end in recovery. 3. The conditions of body in these cases of excessive temperature appear to be distinct from the conditions existing in fevers, in which the rule as to the extreme peril of temperatures of 107° and upward remains unassailed.—*Mr. J. W. Teale.*

PYÆMIA.—The symptoms of pyæmia are those of enteric or typhus fever, with a large but varying intermixture of the hectic form. The main distinctive criteria are the following:—If the rigors and the perspirations which commonly signalize the onset are repeated throughout the career of the case in disorderly fashion, you may safely exclude enteric fever, typhus, ague, and acute rheumatism. Moreover, in the first mentioned the fever-spots are pathognomonic and cannot be mistaken for the sudamina and pustules of pyæmia. Far above and beyond all other criteria is the testimony of the thermometer. The free and fitful oscillations on the chart are unerring and all-sufficient guides to the diagnosis. Nevertheless, it would be well to pause awhile and to enlarge upon the differential diagnosis of pyæmia and acute rheumatism. No two diseases are so often confounded; indeed, at the first sight the confusion is almost inevitable unless there is something in the circumstances of the case positively to foreshadow the coming of pyæmia. I warn you now in all cases that bear the least resemblance to acute rheumatism, when associated with nervous derangement, never on any account to allow the temperature to go beyond 104°, or at most 105°, before you resort to the bath.—*Sir Henry Thompson.*

ACUTE RHEUMATISM.—The treatment of the disease by rest, by a comfortable bed, by good hygienic measures, by careful nursing, by local and general anodynes, is apparently all that can be done. Notwithstanding what has been advanced to the contrary, so far as our hospital statistics deal with the matter, no specific cure for rheumatism appears to exist, while all drugs hitherto administered—salicylic acid and its congeners not excepted—seem palliative rather than curative in their action.—*Dr. R. Southey.*

Tissue Changes in Childhood. SEEMAN.

From his researches Seeman draws the following conclusions :

First. That the healthy child shows, in its urine, a constant relation between the proportion of nitrogen and phosphoric acid ; that nitrogen is retained in much greater quantity than phosphoric acid.

Second. That the rachitic child shows a lesser per centage of phosphoric acid than the healthy child, and consequently eliminates more nitrogen.

Third. That the rachitic child forms tissues richer in salts than the healthy child.

Fourth. That rachitic children, like healthy children, retain in their economy, with extreme energy, chalk and magnesia.

Seeman was forcibly struck bythe comparatively limited elimination of calcareous salts among rachitic children. He also finds that children, whether rachitic or not, eliminate a greater proportion of phosphoric acid than adults.—*Berlin Klinische-Wochenschrift.*

Epidemic Dry Pleurisy. By DOLDER.

This designation, employed by Dolder for lack of a better, characterizes rather incompletely a disease which appeared last summer in the Swiss Cantons, attacking several thousand persons of every age and sex. This disease, obscure in its nature, and difficult to classify nosologically, has been the subject of recent discussion in Switzerland. There is total lack of any knowledge as to its etiology ; it is only known that the first cases made their appearance during the last half of June, and it was not until the middle of August that the disease became widely extended. No cause has been discovered; cold and habits of living can safely be excluded. Frequently entire families have been attacked by the disease, which is propagated from neighbor to neighbor. Suddenly, without any prodromata, the disease appears, ushered in oftentimes by slight shivering, but at no time are there well-marked chills. Some of the patients complain of great pain in the side, having its seat in the diaphragm, over the liver. In others, the pain attacks first the head and abdomen, before appearing at the base of the thorax. Very frequently the spinal column is very painful on pressure, more especially in the neck. Cough and sneezing provoke almost unendurable pain. The respirations are forty and more per minute. The patients complained, at the same time, of intense heat, and of a sensation of pressure and fullness at the pit of the stomach, with, at the same time, loss of appetite, constipation, and, in some cases, vomiting. Convulsions have been very frequent among children. In spite of these, functional symptoms are almost null. The pulse generally oscillates between ninety and a hundred and twenty, and the temperature between a hundred and, reaching rarely, a hundred and four. The respiratory sounds were very feeble over the two lungs ; deep inspiration caused great pain. At the second or third day a short, crepitant sound, resembling a slight friction sound, or a crepitant rate, was heard on the same side as the pain, which was frequently transformed, at the end of two or three days, into an ordinary pleural friction sound. Some patients have had a pleural effusion more or less, a pleural pneumonia, with bloody spittle, and, perhaps, bronchitis. One patient had a pericarditis, with abundant effusion. A very frequent symptom was the appearance of a roseola on the chest and abdomen. The urine contained much sediment. Tumefaction of the spleen frequently occurred, but passed unnoticed, owing to the rapid progress of the disease. There was frequent radiation of the thoracic pains toward the shoulder ; no articular complications. Relapses proved a characteristic feature of the disease at all ages, at the end of from two to eight days. Some patients had two consecutive relapses. Pregnant women were not spared by the disease, which frequently caused among them abortion and premature labor ; while some children fell victims to the disease. No adult died. The disease lasted, in the majority of cases, from two to ten days, but was prolonged for some weeks among the few cases who had considerable effusion into the large serous cavities. The patients frequently complained of pain in the centre of the thorax, intercostals, and some muscles of the extremities. At the onset, cutaneous revulsives (sinapisms, dry and wet cups,) proved very useful, as, also, cold cataplasmata. The only internal medication that proved of service was the benzoate of soda, in from one and a-half to two drachm doses.

This affection showed three striking features :

First. Its frequent relapses.

Second. The disproportion between the rational and physical symptoms, the latter being of little importance.

Third. The simultaneous attack of many serous membranes and the mucous membrane of the intestinal canal, together with various muscular groups.

No microparasite has been found by examination of the urine, matters vomited, or blood.

The Swiss physicians regard the disease as a contagious miasmatic affection.—*Correspondenz Blatt fur Schweizer Aerzte.*

A Peculiarity of the Appendix of the Testicle. By M. Roth.

It has been very difficult to explain hitherto, the frequent presence of fragments of spermatozoa in the serous liquid of a hydrocele, which has usually been charged to the rupture of a spermatic cyst. The recent researches of Roth furnish a very logical explanation. He has found that very frequently if not always there exists a communication between the epidedymis and vaginal cavity, by the means of a small *vas deferens*, which ends about the summit of the testicular appendix. The anomaly is probably a remnant of what is found in the fœtal state.—*Virchow's Archiv.*

Treatment of Bright's Disease. By M. E. Renzi.

At the medical clinic of Genoa, where these patients are very frequent, Dr. Renzi has pursued treatment for some time of one kind ; then, for a similar period, to try another treatment. This method is, of course, open to various objections. Dr. Renzi arrived at the following conclusions :

Firstly. That Bright's Disease is not an affection where a spontaneous cure is to be hoped for, with exceedingly rare exceptions. However, rest in bed only, with a milk diet, is a very potent means of diminishing the albuminuria.

Secondly. Fuchsine, which has been

lately much recommended, diminishes decidedly and rapidly the amount of albuminuria in the urine.

Solutions should not be given, as their color renders the patient uneasy; but pills should be used in preference. The drug can be pushed to four grains per diem. The urine becomes rose-colored, and where this tint fails to appear, the remedy is of no avail. The mucous membrane alimentary canal and the blood have something of the same tint. The mucus so common in the urine of Bright's disease disappears rapidly under the use of the drug.—*Virchow's Archiv.*

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CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

Riverside Hospital for Contagious Diseases, Blackwell's Island, N. Y. DR. FRANK W. CHAPIN, Resident Physician; DR. J. N. McCHESNEY, Assistant Physician.

Case I.—*Second attack of Variola within a very brief period.*

A female 10 months old was admitted to the hospital with the following history:

The patient had been with her mother and three brothers on a visit to Italy and on their return the family were detained at quarantine because the mother, brothers, and this patient were attacked with small-pox, the diagnosis being made by one of the most prominent diagnosticians of New York. This patient was admitted to the hospital May 7th, 1880, had never been vaccinated, and had presented symptoms of small-pox for five days previously. On admission there was but little fever present. There was an umbilicated variolous eruption on face, neck, and arms. The vesicles were pricked with a needle dipped in a solution of Nitrate of Silver and dried up without leaving scars, complete desiccation occurring on May 20th, and the patient having completely recovered, was discharged May 26th. She was re-admitted June 6th, with a temperature of 104, rapid and weak pulse, slight nausea and covered by a variolous eruption in the vesicular stage, the vesicles being half grown. The mother who accompanied the patient stated that the eruption appeared four days previously, first on the face, next day on the hands and feet, and the following day on the rest of the body.

The eruption was confluent on the face and neck, and discrete on the rest of the body, being umbilicated on the extremities and body.

June 9th.—There was slight rise in the patient's temperature and the pulse became rapid and weak, the eruption having reached the pustular stage. Cold sponging (quinine being considered unadvisable in variola, not only because of its lack of antipyretic power in this disease, but also because of its nauseating tendency), reduced the temperature one degree. Stimulants were given in addition.

June 11.—The sponging has much reduced the temperature, which continues comparatively low, the pulse being slower and stronger. The eruption has begun to desiccate.

June 13.—Desiccation continues—sponging keeps temperature nearly normal.

June 20.—Desiccation; both middle ears have become inflamed and are being treated antiseptically.

June 26.—The eruption has disappeared; there is but little pitting, except a few spots on tip of nose, arms, and back of hands; no means, however, were used to prevent it except vaseline inunctions after the sponge baths.

July 8th.—The patient was discharged recovered.

Thirteen days after the patient's first admission, a brother who had not been to Italy with the rest of the family was admitted into the hospital suffering from small-pox, he having contracted the disease from this patient during the initial stages of her first attack, as was shown by the clearest evidence.

Case II.—*Scarlatina with Typhoid and Diphtheria Symptoms.*

Winnie H—, æt 6., admitted Nov. 13th, 1880. Had on admission a general scarlatinal eruption ; complained of sore throat, tonsils red, swollen, covered with a whitish membrane, temperature 105°, pulse 118, and respiration 40. Temperature reduced by sponging to 103. No albumen in urine.

Nov. 14th.— Morning—temperature 104½; reduced to 103; remaining from 103½ to 104½ on next two days, requiring sponge every hour; coughed and was restless; urine scanty; took nourishment freely; remained about the same for next day, the 15th, when she was a little delirious. A.M., T. 103, evening, 102 3-4. Sponging.

Nov. 16th.—Restless, coughed, drank milk, urine scanty, no albumen.

17th.—Slept till twelve; shows copious diphtheria on tonsils, eruption fading and desquamating, takes food sparingly, patient dull, but when aroused irritable. Use Digitalis and steam inhalations of salicylic acid and lime water.

18th.—Stimulants, brandy; temperature rose to 108°, axilla; in mouth 105°; pulse 130 ; received Jaborandi ; slight salivation but no perspiration; 5½ temperature 104 axilla; passed urine involuntarily, tenderness noticed over tympanitic abdomen on pressure. Desquamation came on with diarrhœa this day.

19th.—Mouth temperature 102°, axilla 104°, rectum 104°; sponged, but temperature went up and reached 106° at 3 P.M. Had muttering delirium night of 19th; extremities cold, pulse weak, irregular; no albumen in urine, discharges generally watery and dark, light and ochreish at times.

20th.—Passed urine involuntarily in increased quantity, no albumen, temperature remains same; no membrane in throat; tongue dry, red, glazed; skin hot, purplish; no diarrhœa.

21st.—Diarrhœa, temperature not below 104½°; sponging brings it down 2 or 3°, but it rises, reaching 106° at noon. Pulse 120.

22nd.—A.M., pulse 146, T. 104 1-2. Patient's pulse at times imperceptible. Patient complaining greatly of cold. For the throat trouble local applications are made. Passes fæces involuntarily and during the next five days moans and talks during sleep, and is very delirious. Diarrhœa continued with involuntary passages. The temperature did not fall below 103° until noon of the 28th, when it fell to 101½° rising subsequently to 104°. Had nasal hæmorrhage on the night of the 27th.

On the 28th, the left cheek became swollen and painful and was poulticed. The patient passed urine in bed, more abundant in quantity, and on examination it was found to be slightly albuminous. The patient is delirious. In the evening of the same day there were a few casts in the urine, which was scanty and dark. The patient had eleven passages in bed, mostly water, and of an ochreish color.

On the 29th, the swollen cheek was opened into the mouth and discharged much bloody pus, the wound being washed out with carbolic acid.

The 30th, a very foul sloughing ulcer extended along the gums of both jaws. There is also a sloughing ulcer on the left side of cheek, which has a very foul discharge. A portion of the ulcer was clipped away, and the rest cauterized with strong carbolic acid. The patient had from ten to twelve somewhat bloody stools, and is very drowsy and dull, the eyes being half closed when sleeping. The ulcer has denuded the bone and the teeth are loose, the sloughing extending towards palate. The granulations of ulcer were again clippped and cauterized.

Dec. 1st.—A fœtid discharge made its appearance from the ear, showing that the sloughing process had passed up the eustachian tube. The patient died that evening.

At the autopsy, the head was not examined, lungs were somewhat congested, heart normal. The mesenteric glands were enlarged. The Peyerian patches of the intestine all showed a uniform shaven beard appearance. The kidneys were congested, there being numerous cortical apoplexies. Spleen enlarged.

Case III.—*Hæmorrhagic confluent small-pox.*

Male, 50 years old, admitted July 5, 1880; complained of feeling tired, heavy and vaguely ill at ease for two days previous to admission; had a very poor appetite but no nausea. The evening previous to admission had a chill, followed by slight febrile symptoms. July 6, patient complains of pain in the head, back and extremities; the fever is somewhat greater; temperature 100°. July 7. Patient has had another chill followed by a slight rise in temperature; bowels are constipated. There is no nausea, and no epistaxis. A scanty macular eruption has made its appearance on the body. He has a marked feeling of constriction over the chest. The patient gives the history of an imperfect vaccination when a child. July 8. Patient's temperature this morning, 10 o'clock, is 103°; pulse 108; respiration 38; he has been ordered a sponge bath. The eruption is becoming papular 5 P.M.; same day the patient's pulse is 110; his temperature 104½°, and his respirations 38. July 9th. The patient received a cold sponge bath this morning, and at 8 A.M. his pulse was 92; temperature 101½°; respirations 22. The patient's appetite is better, sleeps better, bowels not constipated, pain in the head not so intense, and the general feeling of the patient is better. The eruption is increasing, a very few vesicles having made their appearance. 5 P.M. same day. Pulse 104; temperature 104½°; respirations 26. July 12. Patient's treatment of yesterday was repeated. Morning—pulse 80; temperature 102°; respirations 20. There is a marked increase in the eruption, which has an extremely livid areola. It begins to be more generalized. The maculæ on the face having become first vesicular and then pustular, are now becoming confluent. The cheeks, lower eyelids, lips, and nose have become swollen, and in the lips and nose is a throbbing. Patient has some photophobia and conjunctival congestion. Patient's appetite is good; he is restless during sleep. At 5 P.M. his pulse is 92; respiration 24, and temperature 105¾°. July 13th, 9 A.M. Patient's temperature is 103¾°; pulse 110, and respiration 20°. At 5 P.M., same day, pulse 108; respiration 21; temperature 101°. During the next three days his temperature varied between 101 and 104°, being capable of a two-degree reduction by means of cold sponging. By the sixteenth of July his temperature rose to 104⅜°. The eruption became hæmmorrhagic in patches, and the patient grew somewhat delirious at night. From July 16 to July 18 the patient's temperature varied from 101 to 104½°, being reducible by cold sponging, which also modified the delirious excitement. From July 19 to 25 the patient's temperature varied between $99\frac{1}{4}$ to $101\frac{1}{8}$°, being reducible by cold sponging. The patient having at times much diarrhœa and general œdema; large sanguinolent bullæ making their appearance on the lower extremities. On Aug. 3 an abscess made its appearance at the site of an old gunshot wound which was opened and carbolized, as were also several abscesses which appeared on various parts of the body. In October the patient was discharged, fully recovered and in excellent health, but bearing deep traces of the disease.

The general treatment of small-pox in this hospital is supporting; quinine being given only as a tonic, not with any idea of reducing temperature, which is generally done by means of cold sponging and the Kibbee Cot.

Case IV. *Scarlatina, second appearance in a very short interval.*

A. B., male, 38 years of age, was admitted to the Hospital Sept. 25th, having been discharged therefrom two days before, when he had fully recovered from the desquamatory stage of scarlatina. Two days after had been seized with vomiting and diarrhœa, was restless during sleep, had a poor appetite, and complained of darting pains in the chest and extremities. By Sept. 29th these symptoms had mainly disappeared, but the patient's abdomen became tympanitic; urine small in quantity but free from albumen. On Oct. 2d these symptoms had disappeared, the patient slept well and had a good appetite. On Oct. 4th a scarlatinal rash made its appearance on the extremities and spread rapidly over the whole body. The tongue was clean, but its papillæ were markedly congested; the patient's temperature rising at the same time to $104\frac{3}{4}$°. On Oct. 6 the patient was seized by nausea; slept poorly, but the eruption, which is very bright on the face is fading elsewhere. The eruption passed through the usual stages of a scarlatinal eruption, and finally completely desquamated. Oct. 27, the patient has recovered completely.

The treatment pursued in this case as in other scarlatinal cases, was chiefly supporting, cold sponging to reduce the temperature, followed by the vaseline inunction, especially during the desquamatory stage. Salicylic acid being at times used; the urine is examined daily.

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MEDICAL SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

At the December meeting of the New York Neurological Society, Dr. T. A. McBride presiding, Dr. Spitzka presented a case of the *grand spasm hysterique* of Charcot, complicated by stigmata. The patient was a Cuban lady, twenty-five years of age, who had come under the Doctor's observation while suffering, from hæmatemesis, which was regarded by many physicians as of a vicarious menstrual nature, but was traced by the Doctor to the presence of a gastric ulcer situated at the pylorus, as shown by symptoms, the existence of which had been ignored by the physicians previously examining the patient. Complicating this ulcer were many of the phenomena of hysteria, all of which temporarily disappeared on successful treatment, to reappear some months after, under the influence of some emotional excitement. The phenomena consisted of aphonic attacks, hystero-epileptoid attacks, and, latterly, of the phenomenon of stigmata, a fluid having made its appearance from the uninjured skin of the left sixth intercostal space, which was demonstrated microscopically and chemically to be blood. The case was discussed by Drs. J. L. Corning, C. J. McGuire, L. C. Gray, and Birdsall, who admitted the existence of the hysteria, but considered the disappearance of the symptoms, upon treatment of the gastric ulcer, as either merely fortuitous, or due to the influence of mental therapeusis, with which opinion Dr. Spitzka agreed.

Dr. Morton doubted the case being a true example of *grand spasm*, it differing in some particulars from those given by Charcot, and cited several cases which, however, were claimed by Dr. Spitzka to vary as much from each other as the present case varied from Charcot's description. Dr. Wm. A. Hammond regarded the case as a true case of Charcot's grand spasm, and remarked that, like many cases of this kind which he had recently under observation, the patient would probably be easily hypnotized, remarking at the same time he had seen quite a number of cases of stigmata. Upon an attempt to hypnotize the patient being made, she was found fully prepared to resist the attempt by her will power, and it in consequence proved to be a complete failure.

Drs. Seguin and M. Putnam Jacobi regarded Dr. Spitzka's diagnosis as correct, and were of opinion that Dr. Morton's cases, quoted from Charcot, did not agree with Charcot's description as given by the Doctor.

Dr. R. W. Amidon then read a paper on the subject of *Cerebral Thermometry*, in which he narrated some experiments tending to show that mental processes caused an elevation of temperature in certain regions of the head, and claimed that these were due to the fact that mental action was going on at these particular points, causing an increased afflux of blood. He also criticised the recent experiments of P. Bert, which the latter claims show that the skull is a bad and variable conductor of heat, and cited some experiments of his own, which Dr. Amidon claimed were performed under more favorable circumstances than those of Bert, and which he believed disproved those experiments.

Dr. Spitzka said he had not performed, nor did he intend to perform experiments. The results are so contradictory in cerebral thermometry, both to themselves and to well-known laws of physics, that it was evident the matter had certainly been over-estimated both as to its practical and theoretical value. One fact mentioned by Dr. Amidon was certainly suggestive—namely, that his experiments required to be performed at a certain temperature in a cold room; otherwise they were varying and valueless. He could not see, as the matter stood, that Dr. Amidon's experiments disproved those of Bert.

Dr. M. Putnam Jacobi claimed that Dr. Spitzka's reasoning was *a priori*, and therefore inadmissible. Dr. E. C. Seguin claimed that if it was *a priori* reasoning that had been indulged in by Dr. Spitzka, which consisted in simple criticism of the results and conclusions arrived at, no reasoner could object to its use; and he held himself competent to criticise experiments even if he had not performed them himself. At the same time he believed that Dr. Amidon's researches were of value, both from their suggestiveness, and from the fact that seemed to him established by them—namely, that intellectual operations caused an increased afflux of blood to the brain, and therefore a rise of temperature.

Dr. Gray, while holding with Dr. Seguin that Dr. Spitzka's reasoning was admissible, claimed that the fact of cerebral thermometry was beyond cavil, and mentioned an instance where he had diagnosticated a tumor by its aid.

Dr. Spitzka claimed that diagnosticating a gross cerebral disease like a tumor, and discovering delicate changes produced by mental action, were very different matters.

Dr. Hammond agreed with Drs. Gray and Seguin, that criticism of any experiments were admissible by any competent scientist, even providing he had not performed such experiments. He held, also, that cerebral thermometry was justifiable, but that the ordinary thermometers were too gross to discover minute changes of temperature, for which purpose he thought Lombard's thermo-electric calorimeter preferable.

Dr. Gray reminded Dr. Hammond that Dr. Lombard had abandoned as valueless all the results he had obtained by this instrument.

Dr. Hammond said this was due to Dr. Lombard's peculiar temperament, and not to any defect of the instrument, with which he had been for some years making observations, after eliminating elements of error, and which he would soon publish. The instrument was a very delicate one, but its elements of error could be easily eliminated.

The Society then adjourned.

SURGICAL SOCIETY, PARIS, DECEMBER 15, 1880.

At the French Surgical Society, Dr. M. Tillaux, President, Dr. Le Dentu reported several personal observations on *epithelioma*. In the case of patient first operated on, a relapse had occurred almost immediately, and death occurred; a second had been caried off by a frightful hæmorrhage; a third was attacked by an epithelioma having a very fœtid odor, having all the appearance of a gummatous ulcer, which rapidly involved the two anterior thirds of the organ. There was no apparent glandular degeneration. Dr. Le Dentu removed at one operation the tongue and one of the anterior pillars of the vault of the pharynx. The operation was at first a wonderful success, the swelling of the stump allowing the patient to speak freely. Later on the disease again made its appearance and carried off the patient. All the patients treated had been extremely affected. The last patient operated on had been attacked by *lingual and buccal psoriasis*, and had at the same time a lingual epithelioma of fungoid variety. This cancer was situated on the right lateral half of the tongue. The tongue was removed by means of the electro-cautery, in 1876, and the patient has not as yet had the least relapse. There was no doubt about the diagnosis in this case, which had been agreed on by Verneuil and others.

Dr. Perrin had removed six epitheliomas in eleven years, in patients of all ages and sexes. There was no glandular degeneration. He had sometimes used the écraseur, sometimes the thermo-cautery, sometimes the galvano-cautery. The result was, as a rule, good; lasting in most cases without relapse five or six years. He then narrated the case of a lieutenant-colonel of cavalry, attacked by epithelioma and lingual psoriasis; on one psoriosis, he said, the scales had fallen, and at this spot the white, shining hue of psoriasis had been replaced by a livid red surface, which latterly became markedly indurated. He then operated. The result was good, but two years later the patient was carried off by a frightful relapse. Two categories of epithelioma of the tongue ought to be established, Dr. Perrin thought:: 1st. Those in which an operation was practicable: 2d. Those in which it should not be attempted. Those which should not be operated on were: First, the cancer with glandular degeneration; second, the cancer which affects the mucous membrane, that interstitial structure which develops in the superficies. He would not operate if the cancer showed evidences of having invaded distant parts, and would have recourse to the sub-hyoidean operation but rarely. He preferred a lower incision with a white heat knife.

Dr. Le Fort would not operate if the cancer involved the mucous membrane beneath the tongue.

Dr. Despres believed that long survivals after the operation were exceptional. He agreed with Dr. Perrin as to the best instrument to operate with.

Dr. Trélat claimed that topical treatment of the tongue was useless; that the question both of the mode and means of operation should be governed by the induration indicated.

Dr. Verneuil—The question as to whether cases having glands affected should be operated on, would be best decided by the seat of the affected glands. He believed in the sub-hyoidean operation, because by that the glands would be easiest removed.

The Society then adjourned.

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CORRESPONDENCE.

"Sit mihi fas scribere audita."

A Fœtus of 148 Days Lives Eighteen Hours.

Rochester, N. Y., Dec. 10, 1880.

Dear Dr. Gaillard: More strange than practical, but to me very interesting, is the report of this case. It touches upon a mooted point—viz., the vitality of the fœtus. A very healthy, strong mother, on her second pregnancy, at three and a-half months, had alarming symptoms of miscarriage. I did not see her in the first four weeks. But the failure of the treatment adopted to arrest the flooding induced a change of counsel.

I soon recognized the difficulty as proceeding from placenta prævia, and so informed the husband. After diligently combating the trouble for two weeks, miscarriage eventuated. The fœtus was delivered completely enveloped in an unbroken sac, with the placenta, at one pain. I found the membrane so thick and tough that the finger-nail failed to tear it open. On tearing open the membrane, the fœtus gave fullest evidence of life. I removed it and gave it to the nurse, directing her to keep it as warm as possible. After the ordinary care of the mother, I looked after the child; found it perfect in all its parts, even to the finger and toe nails. All its motions were natural. I gave it a little warm milk, which she took really greedily, and with all the motions of a fully developed child. She evacuated plentifully, both from the bowels and bladder, and performed all of her functions normally, and lived eighteen hours, consuming about three ounces of hot milk, and evidently relishing it. The interesting feature of the case is, that the mother's last menstruation occurred on the 26th June, and passed through all its phenomena perfectly naturally.

The catamenia appeared on the 26th June, and disappeared, according to her habit, in five days. The child was born on the 26th November, 153 days after the first day, and 148 days after the last day of the menstruation.

Now, it is established beyond the shadow of a doubt that this lady was not pregnant before the 26th June:

Query—Was that fœtus a legal person, and in the event of title, or property, could she inherit? The French law establishes personality of the fœtus if alive at 180 days, for no child is known to have matured at less age.

Remember, this diminutive child (for it weighed barely one pound) gave all the evidences of vitality for eighteen hours, performing every function.

What say you?

Respectfully,
F. B. WATKINS.

FORT GRIFFIN, TEX., *Dec.* 1880.

E. S. GAILLARD, M. D.,

Dear Doctor:—As I have never contributed anything to your valuable JOURNAL I have concluded to report a case of intestinal obstruction that came under my observation a short time since which may be interesting to some of the numerous readers of the JOURNAL.

Was called Nov. 4th to see Mrs. E. aged 26 years, married, but has never borne any children. She was suffering with pain, and tenderness in the lower bowels, apparently in the uterus and its appendages. Dr. B., an old practitioner of this country, was called to the case about ten days before myself, but his present home being sixteen miles away he saw the case only once and prescribed for what he thought a return of an old case of endometritis but with no effect. A Post Surgeon was then summoned who made the same diagnosis, but could not attend to the case and requested me to do so. I found the bowels slightly tympanitic and so tender she could not bear the weight of my hand at any point, which prevented my making a thorough examination. Not being satisfied or an advocate of intra uterine medication without knowing the probable cause, I ordered a hot poultice of flaxseed meal and mustard to be applied for the abdomen, a Dover's powder given, and left my patient until late in the afternoon. (She told me in the outset that her bowels were perfectly regular.) I found on returning that I could proceed with my examination without so much pain from pressure, and in touching the ascending transverse, and descending colon, I found over the region of the sigmoid flexure a circumscribed spot about the size of a goose egg which at once led me to believe, that a mass of fæcal matter existed. Gave following prescription with enema of warm starch water and tinct. opii and poultices kept to the bowels:

℞	Acid Carbolic, .	♏xxx.
	Morphia Sulph, .	grs. jv.
	Glycerine, . .	℥ ss.
	Aqua qs., . .	℥ ij.

M. Sig. teaspoonful every 3 hours.

Nov. 5th found patient resting well, temperature and pulse very much reduced, but was informed by the nurse that nothing but the clyster had been discharged. I ordered the nurse to keep up the same treatment promptly until I returned, which was not until the following morning, when I learned that the mass had been dislodged and passed out, and to use the language of the woman, "it came near killing her." I examined it and found it to be as large as before described, with a very rough surface and absolutely dry in center. She slept soundly for 2 or 3 hours and when I went back in the afternoon and applied thermometer found her temperature and pulse quite normal.

Discontinued injection, but continued poultices and internal treatment with light saline purgatives to keep bowels open. This was repeated and succeeded in bringing away large fæcal masses, producing soon entire relief.

This woman had been treated several times for severe inflammatory condition of the uterine organs, and I report the case merely to show how one can easily be misled where the idea of "the same old trouble" is to be dealt with.

It could not be determined just how long the mass had been in the colon; but suffice it to say that it had attained to such proportions, distending the gut to such a degree and leaving but a small space for the passage of her daily evacuations, that inflammation was produced in the large intestines, and the consequent inflammation of the womb, through sympathy, thus suspending menstruation.

Her catamenia returned Nov. 9th (2 weeks over the usual period) and she was as well as ever.

Yours very truly,
Wm. M. Powell, D.M.,

1835 Chestnut St.,
Phila., Dec. 6th, 1880.

Prof. E. S. Gaillard, M. D.:

Dear Sir.—In accordance with your invitation, I beg to lay before your readers an abstract of sundry papers which I have published, during the last ten years, upon the Measurement of Red Blood Corpuscles and the Diagnosis of Blood Stains by the Micrometric method. This compilation of my own work seems more justifiable than usual, because some of the articles appeared in journals not now readily procurable.

The detection and discrimination of blood stains is a subject in which every human being has a small but appreciable interest, because whatever makes the discovery and punishment of the crime of murder *more certain*, renders the life of each of my readers, and that of every civilized man, a little *more safe*.

Solomon declares there is no new thing under the sun, and it is indeed surprising how few of the modern scientific discoveries have not been in some degree anticipated by ancient philosophers; nevertheless, it seems to me that I can claim for these results of my investigations upon blood stains, with high power of the microscope, an absolute novelty; because, had the facts been known in former ages, they would have changed the whole current of human events.

Had, for example, a microscopist, armed with a good immersion lens of high power, been present when Jacob's deceitful sons brought in his favorite child's coat of many colors, dipped in goat's blood, how quickly the fraud could have been revealed to the sorrowing father, and the journey down into Egypt, the captivity of the Jews, and their subsequent deliverance by the great lawgiver Moses, with all its momentous consequences to our race, have been totally prevented.

My first investigations in regard to the microscopic examination of blood stains, were published in the *American Journal of the Medical Sciences* for July, 1869. In this article I advocated the employment of high power immersion lenses (1-25th) in such observations, and asserted that by their aid I had been able to demonstrate that the residuum of a dried blood clot, left after the action of pure water—and so long mistaken by Virchow, Robin, and their followers, for "pure fibrin"—was composed chiefly of the cell walls of of the red blood corpuscles, and that by proper management these capsules of the red discs could be brought clearly enough into view, to enable me to measure them accurately, and so distinguish the dried blood of man from that of the ox, pig and sheep, with a certainty disputed by Caspar, Wyman, Fleming, and other previous observers.

In my Handbook of Medical Microscopy, (Philadelphia, 1871), I gave an original woodcut (p. 284), which, for the first time, as far as I am aware, depicts the true appearance of a dried human blood clot, when acted upon by water, as described in my paper of July, 1869.

The possibility of recognizing blood globules, when dried *en masse*, is, of course, closely associated with, if not actively dependent on, their possession of a cell wall, as maintained in my paper, "On the Cellular Structure of the Red Blood Corpuscles," in the Transactions of the American Medical Association for 1870; this theory being mainly supported by experiments upon the gigantic blood disks of the menobranchus, in which crystals of hæmatocrystallin were seen to prop out a visible membranous capsule. See also my remarks in regard to the red blood corpuscles of Amphiuma, in the Transactions of the International Medical Congress, Philadelphia, 1876, p. 488.

Indeed, as I have elsewhere remarked, if the red blood globules are simply homogeneous lumps of jelly-like matter (Beale), the chance of discovering any individual corpuscles in a mass of dry blood clot, however moistened, seems almost as hopeless as the search after individual rain-drops in a cake of melting ice.

Notwithstanding the reprint of this essay in the British *Quarterly Journal of Microscopical Science*, in August, 1873, Prof. A. S. Taylor published the second edition of his great work on The Principles and Practice of Medical Jurisprudence, wherein he asserts (vol. 1, p. 538): "there are no certain methods of distinguishing, microscopically or chemically, the blood of a human being from that of an animal, when it has once been dried upon an article of clothing." Since Dr. Taylor's work is justly considered the highest authority upon its subject in English-speaking countries, I was impelled by his statement to continue my investigations in order to arrive, if possible, at the facts of the case; and in July, 1874, I published in the *American Journal of the Medical Sciences* a continuation of my previous researches. In this paper, after combating the arguments of Taylor, Caspar, Virchow, Brucke, and others, I reported an attempt to *work out* a practical solution of the problem from actual specimens of blood handed me, at my request, for the purpose, in two series, by Prof. J. J. Reese and Dr. S. Weir Mitchell. These series each comprised samples of human, ox, and sheep's blood (the animals being selected as those to which murderers are particularly likely to attribute suspicious blood stains upon their clothing), and were examined according to the following method, which I still use and recommend:

"Small particles were broken up into fine dust with a sharp knife, upon a slide, and covered with a film of thin glass. A few drops of ordinary three-quarters of one per cent. common salt solution were then successively introduced at one margin of the cover, and removed at the opposite edge, as they penetrated thither, by a little slip of blotting-paper, thus washing away the coloring matter from the tiny masses of dried clot. When these particles were nearly decolorized, a drop of strong aniline solution (fuchsine) was allowed to flow in beneath the cover, and, after remaining about half a minute, was in its turn washed away and its place supplied by a further portion of weak salt solution."

Accurate measurements of ten of the least distorted corpuscles thus brought into view (given in full in the paper,) enabled me to easily distinguish each of the animal bloods from that of man, as I think any microscopist among my readers, who possesses good 1-16, 1-20, or 1-25 immersion objectives, can do, if they will devote sufficient time and attention to the experiment. This communication, accompanied by an illustrative woodcut, may also be found in the London monthly *Microscopical Journal* for September, 1874.

Apparently overlooking the fact that my paper was the avowed continuation of a previous essay, in which I had expressly stated: "Although it must be admitted that the blood corpuscles of a few mammals approach so nearly in size to those of man as to render their distinction doubtful, yet, for the practical testing of blood stains in criminal trials, we will rarely find that such a decision is necessary, since, as a rule, justice only requires that a positive diagnosis shall be made between human blood and that of animals which are commonly slaughtered for food, such as the ox, the sheep, the pig; or of birds, as for example chickens, ducks, &c. (p. 56.) Dr. J. J. Woodward, Surgeon U. S. A., published a sharp criticism upon my remarks, in a learned and able article, entitled, "On the similarity between the red blood corpuscles of man and those of certain other mammals, especially the dog; considered in connection with the diagnosis of blood stains in criminal cases." (Vide *Am. Journal of the Med. Sciences*, Jan., 1875.)

To this I replied in the April number of the same journal, and more at length in the monthly *Microscopical Journal* of London for June, 1875, that Dr. Woodward states he writes to point out that it is "never in the power of the microscopist to affirm truthfully, on the strength of microscopical investigation, that a given stain is positively composed of human blood, and could not have been derived from any animal but man." With this proposition I fully agree, contending, however, that whilst it is literally true, it is *not the whole truth*, because, as may often happen in medico-legal practice, *when evidence other than microscopical* narrows down the conditions of the case to the question, is this stain human blood or that of an ox, pig or sheep? the microscopist can, from fair specimens of blood spots as ordinarily produced, affirm truthfully that the "given stain is positively composed of human blood," should it be really so. This second statement I believe Dr. W. will admit, as an additional part of the truth, and if not I undertake to convince him (as I have some other candid doubters among my friends) by incontestable evidence.

Our real difference, then, is not mainly upon matters of fact, but on a matter of opinion, respecting the *just prominence* which should be given to the circumstance that "the blood-corpuscles of a few mammals approach so nearly in size to those of man as to render their distinction doubtful."

Now, whilst I honor Dr. Woodward for the discharge of what he conscientiously believes to be his duty, it seems to me, with all due deference to his superior experience, that he has in the first place a little undervalued the caution and prudence of our numerous medical brethren, who possess microscopes without considering themselves experts, and second that he has overlooked a most important factor in the calculation which we both, perhaps equally, sought to make, of how to secure for humanity by our researches the maximum advantage with the minimum amount of injury. This factor I conceive to be the keen, sharp-witted lawyer, to be found not only in every city, but in every country town throughout English-speaking countries, who, whilst studying during a trial my essay, if it were brought forward to support the baseless pretensions of an unqualified microscopist, claiming to distinguish human from dog's or monkey's blood, would infallibly discover, that not one syllable of its carefully-worded statements could be construed into warranting such a groundless assumption.

Hence, trusting to this powerful and omnipresent element, for the protection of two or three innocent persons, who might possibly be in danger through my agency of conviction for manslaughter, I felt whilst writing both my first paper and its continuation, that should I more than indicate the animals which render our conclusions doubtful, my work would be rendered really prejudicial to the interests of society. Indeed it was, I think, fairly to to be anticipated, that if I should emphasize and reiterate the fact that science alone could not detect the falsehood of a criminal's story, if he cunningly asserted that suspicious stains were made by the blood of a dog, not only would I frequently obstruct the course of justice, but some jealous critics would utterly condemn my investigations, and compare me to a locksmith winning a wide reputation among the "dangerous classes," by an essay most minutely teaching thieves *the truth* in regard to the secrets of opening bank vaults and fireproof safes; or to a toxicologist publishing a treatise, setting forth *most faithfully* the method by which poisoners may best destroy their victims, with the least danger of detection in their crimes.*

It should be remembered, also, that in all cases a really innocent person, wrongly accused of murder on the ground of blood stains upon his clothing, &c., actually proceeding from that "constant" (yet rarely slaughtered) "companion of man," the dog; or from some of our unusual associates, such as seals, otters, guinea-pigs, &c., needs neither Dr. Woodward nor Dr. Richardson to prompt him to tell (and try to corroborate the assertion,) when first arrested, the *true* origin of the suspicious blood spots.

Such then were the arguments which influenced me to publish my researches in a guarded manner; but now, since Dr. Woodward has bravely taken all responsibility for harm that may ensue upon himself, I am glad, for the benefit of the *few* rash microscopists and dull-brained lawyers our countries produce, to state explicitly my full corroboration of the Doctor's assertions, and declare that as far as I am aware there is at present (1875) no method known to science for discriminating, microscopically or otherwise, the dried blood of a human being from that of a dog, monkey, rabbit, musk rat, elephant, lion, whale, seal, or in fact any animal whose corpuscles measure more than $\frac{1}{4000}$ of an inch in diameter. Hence, therefore, until further discoveries are made, a microscopist's best efforts at revealing crime can only serve the cause of right and justice in those cases where the criminal's attorneys, in spite of being *forewarned*, and consequently forearmed, are unable to prepare or suborn testimony to show that one of the creatures just enumerated has been killed in such a way as to produce blood-stains, which are likely to be confounded with those from the murdered victim. Of course, however, *a change in the prisoner's story*, so as to attribute the blood spots to a dog, monkey,

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* The gendarmerie of Valenciennes have just arrested a Dutchman whose profession is, to say the least of it, extraordinary. He is a dealer in all sorts of instruments employed by burglars and thieves. When arrested he had in his possession a large stock of pamphlets giving the fullest directions as to the best plan for waylaying people on the high roads, and also how to kill them without any noise in case of resistance.—*Chicago Med. Jour.*, May, 1875.

&c., *after* consultation with shrewd lawyers for the defence, or scientific friends, as in the case mentioned below, *must have great weight with the jury*, and go far to *put them on their guard against the crafty trick* attempted upon their intelligence.

That I was led to avoid reiterating and emphasizing this failure of our science by no unfounded apprehension of the evil likely to arise from dinning such knowledge into the ears of rogues, is proved by the fact that after my testimony was delivered in the Larribee trial at Franklin, Venango Co., Pa., the prisoner's "keen, sharp-witted lawyer" brought two female witnesses into court, who testified that on a certain occasion about the time of the murder, when the defendant's boots (on which were the suspected blood spots) were standing in the corner of a particular room, they were engaged in clipping the ears of a terrier dog, and just as they got one ear done the baby cried, and they were obliged to let go the dog, which ran round the apartment, shaking its head, and thus sprinkled the boots with its blood. Further to substantiate this tale, a dog with one ear clipped was exhibited to the jury, and sworn to as the very one from which the blood was shed. Fortunately, however, it so happened that I had examined one or two spots upon the prisoner's pantaloons, finding them to be human blood in contradistinction to pheasant's blood, *as he at first explained them to be ;* and since the contrivers of this dog story apparently forgot that the pantaloons were not standing up in the boots, and consequently had no chance to become sprinkled along with them, their ingenious theory failed to gain credence with the jury, who brought in a verdict of guilty of murder in the first degree.

Looking back at this controversy after five years' interval, I am more than ever convinced that the impulses of a pure microscopist in this matter should be controlled by the dictates of the larger and grander science of sociology, which decrees that dangerous weapons, whether mental or physical, should not be placed in the hands of those enemies of society, the criminal classes. At any rate, I have the satisfaction of knowing that the course I followed was unreservedly approved by the *British and Foreign Medico-Chirurgical Review* for July, 1875, then probably the highest medical authority in England or America ; and that Sir Robert Christison, in his classic work upon Poisons, took the same kind of care to avoid contributing to the success of murderers by any information he might give.

Probably few of the most enthusiastic—indeed, I might say, few of the most fanatical—devotees of pure science, would venture to approve the work of the natural philosopher, whose books were confiscated by "the gendarmerie of Valenciennes," although he proceeded upon the directly antagonistic principle to mine, of popularizing the truths of Nature among individuals who would be apt to use this knowledge to aid their violations of the law.

In February, 1875, I devised a simple method of demonstrating to a jury the obvious differences between the blood of man, and that of the various domestic animals slaughtered for his food. As perfected by subsequent experiment this plan is as follows : Place near the upper right hand corner of a microscope slide, a small drop of fresh human blood, and then with a narrow strip of glass or metal, spread a thin streak of it diagonally across the glass, towards the lower left hand corner. Next let fall a drop of pig's blood, for example, upon the upper left hand corner of the glass, and spread a similar narrow stripe so as to cross the first one, at a very acute angle. forming a figure resembling an elongated capital X. On each side of the meeting point of the two lines, will be found (should the experiment succeed) areas, when the two kinds of blood corpuscles are in the same field of the microscope, and so placed as to afford excellent opportunities for direct comparison of their magnitudes. My lamented friend, Prof. Alfred S. Taylor, has introduced a wood cut taken from one of my "double slides," showing the marked contrast between human and pig's blood, into the last edition (Third) of his great work on Medical Jurisprudence; and Dr. B. W. Richardson of London, told me a year or two since, that he had used the photograph of a similar "double slide" which I prepared for him in the stereopticon as a lecture room illustration with gratifying success.

Being called upon in November, 1875, to examine a blood stain upon an axe handle where the spot probably weighed less than 1-3000 of a grain, I was induced to contrive a mode of examining and corroboratively testing very minute particles of blood, which I published in the Philadelphia *Medical Times* for November 13th, 1875, p. 78, as follows:

"Procure a glass slide, with a circular excavation in the middle, called by dealers a 'concave centre,' and moisten it around the edges of the cavity with a small drop of diluted glycerin. Thoroughly clean a thin glass cover about one-eighth of an inch larger than the excavation, lay it on white paper, and upon it place the tiniest visible fragment of a freshly-dried blood clot (this fragment will weigh from one twenty-five-thousandth to one fifty-thousandth of a grain). Then with a cataract-needle deposit on the centre of the cover, near your blood spot, a drop of glycerin about the size of this period (.), and with a dry needle gently push the blood to the brink of your microscopic pond, so that it may be just moistened by the fluid. Finally, invert your slide upon the thin glass cover in such a manner that the glycerined edges of the cavity in the former may adhere to the margins of the latter, and, turning the slide face upwards, transfer it to the stage of the microscope.

"By this method, it is obvious, we obtain an extremely minute quantity of strong solution of hæmoglobin, whose point of greatest destiny (generally in the centre of the clot) is readily discovered under a one-fourth-inch objective, and tested by the adjustment of the spectroscopic eye-piece. After a little practice it will be found quite possible to modify the bands by the addition of sulphuret of sodium solution, as advised by Preyer.

"In cases of this kind, where the greatest possible economy or even parsimony of material is needful, I would advise the following mode of procedure for proving and corroborating your proof of the existence of blood, so that its presence in a stain may be affirmed with *absolute certainty*.

"From a suspected blood-spot upon metal, wood, leather, paper, muslin, or cloth, scrape with a fine sharp knife two or three or more minute particles of the reddish substance, causing them to fall near the middle of a large thin glass cover. Apply in close proximity to them a very small drop of three-fourths per cent. salt solution, bring the particles of supposed blood-clot to its edge, and proceed as I have already directed.

"After thus examining the spectrum of the substance, you may generally, by rotating the stage, cause the colored fluid to partly drain away from the portion, wherein, under favorable circumstances, should the specimen be blood, the granular white blood-globules become plainly visible, as do also cell-walls of the red disks. Among the latter, if your mental and physical vision is keen enough, you can by the aid of a one-twenty-fifth immersion lens and an eye-piece micrometer measure a series of corpuscles accurately enough to discriminate human blood from that of an ox, pig, horse or sheep.

"Lastly, to make assurance triply sure, lift up the thin glass cover, wipe off the tiny drop of blood-solution and clot you have been examining on the folded edge of a thin piece of moistened blotting-paper, let fall upon it a little fresh tincture of guaiacum, and then a drop of ozonized ether, which will at once strike the dark-blue color of the guaiacium-test for blood.

"In this way I have actually obtained these three kinds of evidence, to wit, that of spectrum analysis, that of the microscope, and that of chemical reaction, from one single particle of blood, which, judged by a definite standard (see 'Handbook of Medical Microscopy,' Phila., 1871, p. 283), certainly weighed less than one fifteen-thousandth, aud probably less than one twenty-five-thousandth, of a grain."

In 1877 I had an occasion to examine an axe spotted with blood when a murder had been committed with it twenty years previously; and in a fragment of the stain was able to discover and measure red corpuscles too large to be those of ox or pig.

In order to set at rest the objection that different races ot mankind, might possess red blood corpuscles of varying average diameter, I endeavored to utilize medically the opportunity afforded by our Centennial Exposition in 1876, which by attracting visitors from every quarter of the globe, made it possible for me to obtain well authenticated specimens of blood, from many different nations. The samples were each procured by myself from the individuals mentioned, (sometimes only through much persuasion), by puncturing a finger with the quick stab of a cataract needle, pressing out a small amount of blood, applying a clean slide to the apex of the drop, and then spreading out the portion of fluid which adhered to the glass with the end of another slide. Instead of measuring all corpuscles, deformed or otherwise, in two directions, as proposed by Dr. Woodward, I preferred to determine the size of unaltered—*i. e.*, circular corpuscles only. One hundred corpuscles in each specimen were measured, and the dimensions, as I read them off in millionths of an inch, noted down generally by an assistant. The corpuscles of a Japanese averaged 1-3212; those of a Spaniard 1-3226; those of a Turk 1-3197; those of a Russian 1-3190; those of an Italian 1-3272; those of a Cherokee Indian 1-3215; &c., &c. Combining these results I found that of the 1,400 corpuscles each separately measured, the average was 1-3224 (007878 mm.) the maximum 1-2777 and the minimum 1-4000 of an inch; 1158 or 83 per cent. measured between 1-3448 and 1-3030 of an inch in diameter, and consequently under a power of two hundred would appear about the same magnitude; 118, or about 8 per cent. were less than 1-3448, and 124, or nearly 9 per cent. were more than 1-3030 of an inch in diameter. The total number of corpuscles 1-4000 of an inch across was 6 or less than one half of one per cent. The total number 1-2777 of an inch in diameter was 10, or less than one per cent. *Vide American Journal of the Medical Sciences*, January, 1877.

Since these researches were published I have received from my valued correspondent, Dr. John Day, of Geelong, Australia, a specimen of blood from "King Billy," the last of the Aborgines of that country. His corpuscles show no perceptible variation from the above standard, and we may I believe therefore assert that more than four fifths, of all the corpuscles in human blood are nearly identical in magnitude, and that excessive variations from the average size in either direction, are so rare, as to be practicably unimportant.

To sum up the final results of these observations I conclude :

1st. That in unaltered blood stains as ordinarily produced by the sprinkling of drops of blood upon clothing, leather, wood, metal, &c., we can by tinting with aniline or iodine as I recommend, distinguish human blood corpuscles from those of the ox, pig, horse, sheep and goat, wherever the question is narrowed down by the circumstances of the case to these limits.

2d. By the method I have devised we can measure the size of the corpuscles and apply the two corroborative tests of Tincture of Guiacum with Ozonized ether and of spectrum analysis to a single particle of blood-clot weighing less than one fifteen-thousandth part of a grain, a quantity barely visible to the naked eye.

3d. Hence, when an ignorant criminal attempts to explain suspicious blood spots upon his clothing, weapons, &c., by attributing them to the ox, pig, sheep or goat, or to any of the birds used for food, we can under favorable circumstances, *absolutely disprove* his false statement and materially aid the cause of justice by breaking down his lying defense even if twenty years have elapsed.

4th. But if the accused person is well enough informed to ascribe the telltale blood to a dog, an elephant, a capybara, or any other animal in the long list, my friend Dr. Woodward has benevolently taught him, it is utterly useless for us to attempt to dispute his story, on microscopical evidence as to the size of the blood corpuscles.

5th. In cases of innocent persons wrongfully acccused of murder, and really stained with the blood of an ox, pig, or sheep, testimony of experts founded upon measurement of the corpuscles would be valuable, but less conclusive, because under certain circumstances human blood corpuscles may *shrink* to the size of those of the ox, whilst under no known conditions do ox or pig corpuscles *expand* to the magnitude of those in human blood.

6th. In order to do away with ingenious objections of lawyers that the murdered person may have been affected with some disease which altered the size of his blood discs, or that the articles of clothing, &c., upon which the stains were deposited had produced chemically or otherwise some similar change in their magnitudes, it is very important to obtain promptly, stains from the fresh blood of the victim made in the presence of witnesses upon portions of the prisoner's clothing or weapons analogous to those upon which suspicious red spots are found when he is arrested. When this cannot be done spots of the murdered person's blood sprinkled on white paper, and fragments of his lungs and kidneys should be carefully preserved, the former by rapid drying and the latter by preservation in diluted alcohol. These little precautions which may in any instance prove to be of infinite importance, should be earnestly impressed upon coroners, district attorneys, and policemen throughout the civilized world.

There are many minor points in connection with this interesting subject to which I should like to direct attention, but fearing I have already trespassed too far upon your courtesy, Mr. editor, I will simply refer any curious reader to the various papers quoted above, and remain,

Very respectfully yours,
JOS. G. RICHARDSON.

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MEDICAL CONFESSIONS.

Peccavi.

NEW YORK, Jan. 1, 1881.
DR. E. S. GAILLARD :

Seeing that you have opened a department in your valuable JOURNAL wherein physicians can narrate what they have done and that which they should have left undone, and *vice versa*, I will take the liberty of crying *peccavi* with the rest, and narrate a case where looking over it very closely now I can see I committed an error. A patient was at one time under my care (I being at that time acting in a subordinate medical capacity in an institution) who was suffering from a pneumonia complicated by an acute delirious condition. The pneumonia was treated *secundem artem*, but the patient being exceedingly restless, and the superior medical officer having a mania for the reduction of the consumption of stimulants, I allowed myself to be induced by him to withdraw the stimulant treatment and rely solely on counter irritants; the patient sank somewhat rapidly and died. Although it is possible the patient might have died any way, still the withdrawal of the stimulants is a matter which I have always regretted and shall continue to regret.

Hoping that this may have an influence in inducing others to persist in a treatment that they have once resolved on and have no good reason for abandoning,

I remain yours very respectfully,
J. G. K.

REVIEWS.

"Judex damnatur cum nocens absolvitur."

A Practical Treatise on Surgical Diagnosis : Designed as a Manual for Practitioners and Students. By AMBROSE L. RANNEY, A. M., M. D., Assistant Professor of Anatomy and late Lecturer on the Surgical Diseases of the Genito-Urinary Organs and on Minor Surgery, in the Medical Department of the University of the City of New York; late Surgeon to the North-western and Northern Dispensaries; Resident Fellow of the New York Academy of Medicine; Member of the Medical Society of the County of New York, etc. Second Edition. Enlarged and Revised. New York: William Wood & Co., 27 Great Jones St. 1880.

The best conception which can be induced in the mind of the reader as to the character, intention and scope of this work, is by the statement that it is issued to occupy in the field of surgery a position similar to that taken by the work of DaCosta in the field of the Practice of medicine.

And it is only just to say that in the field chosen this work of Dr. Ranney is fully equal to that of Dr. DaCosta in its special domain. It is true that the volume is open to much criticism, but so is the other work indicated ; and so, indeed, is every volume that is intended to represent any of the departments of a science constantly being developed, and an art progressively and successfully being improved.

That in one year this work has reached a second and enlarged edition, is proof sufficient of its high value and deserved appreciation. It is published at the request of a private class of students. In it all points in dispute (*sub judice*) are entirely omitted. In establishing the diagnosis of each disease, the author has most judiciously compared it with diseases whose symptoms most nearly resemble it; a great desideratum for every one who is in doubt as to the nature and character of any trouble or injury. These symptoms are generally arranged antithetically in tables or in text. While in style and arrangement the work is simple and clear, it is in no respect elementary in character. Indeed, it shows a highly creditable familiarity, on the part of the author, with the most recent works, as well as with the more reliable views of accepted authors.

One error, very manifest and demonstrable, is the omission of all facts in regard to etiology, pathology and treatment, because, as is alleged by the author, "they have no direct bearing upon diagnosis, and do not, therefore, properly appertain to them." Both of these assertions will be regarded as wholly untenable by the great majority of the profession. A knowledge and an enumeration of the facts in regard to the pathology of most surgical troubles furnish very often the best guide in the diagnostication of them. So, also, the nature and cause of any injury furnish often the best means of correctly appreciating and determining the results. This, true in medicine, is especially true in surgery. Indeed, the author has himself so fully felt the truth of these undeniable facts, that he has, in many places, abandoned the original plan of his work.

Of course the subject of inflammation occupies, as it should, a prominent position in such a volume. Like all who have made the effort, the author has failed entirely to give a definition of it. He defines it as follows: "an abnormal condition of tissue, dependent upon irritation, associated with vascular and cellular changes, and alteration in the nutrition and function of the affected part." Under such restrictions one must, perforce, regard all of the scrofulous, tuberculous, and cancerous manifestations as inflammatory in character, a doctrine belonging to the past and not to the present century; certainly not to the latter portion of it. His declaring that pain, heat, redness and swelling are essentially and always "the local changes" occurring in inflammation, is manifestly incorrect and untenable. Dr. J. Hughes Bennett has demonstrated this so incontestably and acceptably, that it would be occupying space superfluously to recapitulate here his demonstrations. That there is always increase of fibrin in inflammation cannot be accepted as the truth. Such increase occurs only when the inflammation has existed for so long a time as to impoverish the blood. That slow coagulation of blood occurs always in inflammation, and is due to an increase of fibrin, is also incorrect. In variola the blood coagulates slowly, while the fibrin is but little increased; and in the sloughing forms of cancer, while the fibrin is increased six and seven hundred per cent., coagulation occurs very readily indeed. Pus can hardly be regarded as "an exudation," and diphtheritic exudation can not be declared to be the result of inflammation. The author adopts many of the views of Cohnheim, and does full justice to Addison; but this portion of the volume needs careful revision. Space does not admit of further criticism, but even though this were continued, it would not be such as to affect the best and most practical portions of this volume.

As has been said, it is highly to be commended, and ought to be generally adopted as a companion, instructor and guide. It is the best issue of this popular and enterprising house, and evinces on their part the best care and workmanship. There is no book catalogue bound with the volume—an agreeable and acceptable fact. The readers of this journal are advised to purchase this volume.

It is to be regretted that there are evidences of very careless writing by the author. The prefaces especially evince this fault, and constitute an unfortunate blemish. They are written in two persons, and contain, besides, unfortunate manifestations of faulty diction.

Common Mind Troubles; or, The Secret of a Clear Head. By J. MORTIMER GRANVILLE, M.D., M.R.C.S., etc. D. G. Brinton: Philadelphia, Pa., 1880. Edited, with additions, by an American Physician.

The author is not well known in this country, but is a distinguished specialist and one of the most distinguished of the London *Lancet's* corps of special investigators and contributors. One of his best volumes is entitled, "The Care and Cure of the Insane." He was selected to supervise "Wynter's Borderland's of Insanity," and it was published under his guidance and care. The present volume is adapted to both the general and professional reading public, and is intended to be a manual of instruction in the hygiene of the mind. The author believes that mind troubles can be overcome by the will; but as will is essentially a product of the mind, it is logically evident that where the mind is impaired, the will (its creation) must be impaired also. The stream cannot rise above its origin. Still there can be no doubt that in many temporary cases the will is a powerful factor in accomplishing restoration. This work includes in its pages the two popular treatises, "Common Mind Troubles," and "The Secret of a Clear Head." It is unreservedly recommended. Dr. D. G. Brinton has published the volume very creditably, indeed. It is to be regretted that the name of the American editor is not given.

First Lines in Therapeutics, as Based on the Modes and Processes of Healing, as Occurring Spontaneously in Disease; and on the Modes and the Processes of Dying, as Resulting Naturally from Disease. In a Series of Lectures. By ALEXANDER HARVIE, M.A., M.D., Edinburgh. D. Appleton & Co., New York.

In these days of nihilism on the one hand and claims for positive medication on the other, a thorough treatise on therapeutics is a great boon. The reader of a review wishes always the best advice for his guidance, and is to a great extent governed in his choice of books by the testimony of competent judges. For this purpose the following testimony of that great teacher, Sir Thomas Watson, in regard to this volume, is with pleasure furnished. There are few who, after reading it, will hesitate to purchase this most excellent work. Writing to the author, Dr. Watson uses the following language: "You have thoroughly threshed out the great theme which you proposed to discuss. It is certain that a sound system of therapeutics must rest on a consideration of what Nature is capable, and, in some few cases, is incapable of doing in disease; and, on the other hand, on what Art may do in helping or hindering Nature. All this I say you have most fully explained, and I feel sure that the student of your volume cannot fail to have his mind cleared up and settled on these important subjects. I see nothing in it which I could wish were otherwise."

The publishers, in issuing the work, have manifested their characteristic care, neatness and liberality.

A Manual of Minor Surgery and Bandaging. By CHRISTOPHER HEATH, F. R. C. S., London. Sixth Edition. Revised and enlarged. Lindsay & Blakiston. 1880.

When a work has reached its sixth edition, it needs no notice, further than to call attention to this fact. The author has, however, revised every page, and made this justly popular and valuable volume more useful than ever. It is just such a companion as every physician needs. The Publishers have issued it in an excellent manner.

School and Industrial Hygiene. By D. F. LINCOLN, M.D, Chairman Department of Health Social Science Association. Presley Blakiston & Co. Philadelphia. 1880.

This is a most excellent and useful treatise. Physicians can not only enjoy it themselves, but will find it highly appreciated by their friends. Every school teacher and every head of a family should read this volume carefully. It is a *multum in parvo* and one of the best of the Health Primer Series. The author has used great care and judgment in its preparation, and the Publishers have issued it substantially and well.

Cerebral Hyperæmia : The result of Mental Strain or Emotional Disturbance. By WILLIAM A. HAMMOND, M. D., N. Y. G. P. Putnam's Sons, New York.

This is one of the most practical, valuable and instructive publications before the Profession. The author's many works are well known, but strange to say, this one is almost wholly unknown. It is one of his best. There are few physicians who are not consulted for the relief of this troublesome and often dangerous condition, and in obtaining sound views in regard to its pathology and treatment, they cannot have a better guide than is to be found in this volume.

The Skin and Its Troubles. New York: D. Appleton & Co.

The name of the author of this volume is not given. His production is, however, very commendable. Its scope may be learned from the following subjects selected: Structure of the Skin ; Functions; Practical Applications to the Conditions of Daily Life ; Skin Troubles from Poisonous Clothing; Injudicious Use of Domestic Remedies, ; The Hair, its Management, etc. While the special diseases of the skin are not considered, it will be observed that the subjects selected are important and practical in character. It is a book which every physician will read with pleasure and profit. It costs a mere trifle, and is well worthy of a place in the medical library.

How Persons Afflicted with Bright's Disease Ought to Live. By JOSEPH F. EDWARDS, M. D. Philadelphia: Presley Blakiston, 1012 Walnut street. 1881.

If the author taught how such patients ought to die, he would have been in the theological field a far better missionary than he has proved to be in the medical. The book is intended for the laity as well as for the profession. It is as useless to one as it is mischievous to the other. The chapter "About Bright's Disease, what it is," is about as amusing as it is absurd. It would be difficult to find in medical literature as many errors in so small a space The book has but one merit, viz.: its brevity; and its errors constitute its only claims to originality. Why do not medical publishers seek proper counsel before publishing such volumes?

Cutaneous and Venereal Memoranda. By HENRY G. PIFFARD, A. M., M. D., and GEORGE HENRY FOX, A. M., M. D., New York. Second edition. Wm. Wood & Co. New York, 1880.

This little volume is prepared for students and practitioners who have paid but limited attention to the subject. All discussion in regard to theoretical questions has been judiciously avoided. Histologica descriptions so necessary even in an elementary volume on these subjects have been entirely omitted ; this is a serious blunder. The prescriptions are given in the old and new methods; the metric system being given honorable recognition.

For the purposes mentioned, this little book may accomplish some good, but the recent tendency to present very many subjects in the briefest manner possible is to be censured rather than commended One may well quote in regard to it Pope's couplet, in regard to the danger of a little learning—students will find it best to "drink deep," or to "touch not the Pierian spring." The book has been written chiefly by Dr. Piffard, Dr. Fox having contributed but a single chapter.

The reviewer for his brevity may remind the reader of the old stave in Mother Goose: "Three men of Gotham went to sea in a bowl; if the bowl had been stronger, my song had been longer."

For those who must know something in regard to the subjects mentioned and yet are indisposed or unable to learn thoroughly, this volume will "have its uses." It is very neatly issued.

The Management of Children in Sickness and in Health. By Amie M. Hale, M. D. Presley Blakiston. Philadelphia, Penn., 1880.

This book is one of those numerous treatises intended for domestic rather than professional use. Some statements are rather astonishing, namely, that 25° F. is not too cold for a child two years old to take exercise in. There are many hints likely to be of great value to an intelligent mother, but the style is a little too stilted for works of this character.

K.

The Pharmacopœia of the British Hospital for Diseases of the Skin. By Balmanno Squire, Senior Surgeon to the Hospital. J. & A. Churchill. London, 1880.

This book is simply a collection of formulæ used at the British Hospital, and contains formulæ and directions of possible and probable value to outsiders, as affording a bird's eye view of English skin practice in its therapeutic aspects. The book is very much condensed and provided with an index that takes up one-quarter of the volume. The volume is well issued by the publishers, and in sending books to American Journals for review, their example might be profitably followed by other English publishers.

K.

Infant Feeding and its Influence on Life; or the Causes and Prevention of Infant Mortality. By C. H. F. Routh, M. D. Wm. Wood & Co. New York, 1880.

This work contains a great deal that is extremely valuable on the subject of which it treats; at the same time much that is out of place in a scientific work. His infant physiology is well up to the times, but his religious and moral cant are rather ill-timed and could with more propriety have been reserved for a tract, or some Exeter Hall publication. The book contains many valuable hints and, considering that it was written in England, is well adapted to be of service in the United States. The author's style is somewhat involved, and at times rather obscure. The book is one of Wood's Library, and is, therefore, fairly issued.

K.

Lectures on Diseases of Women. By J. Matthews Duncan, M. D., LL. D., F. R. S. E. H. C. Lea. Philadelphia, Penn., 1880.

This is a plain, practical work, conveying much information in a clinical manner eminently adapted for the medical student and physician whose leisure admits of but little reading.

While it cannot be said that the book is an authority and as such to be criticized, still there are numerous facts of diagnostic detail so clearly presented as to be of much value to the practitioner, who without wishing or claiming to be an expert gynæcologist, still desires an acquaintance with matters coming under observation in general practice.

The book is pretty well issued by the publishers, who have, however, inserted too many advertisements. K.

Ophthalmic and Otic Memoranda. By D. B. St. John Roosa, M. D., and Edward S. Ely, M. D. Revised edition. New York : Wm. Wood & Co., 1880.

As this little volume has been mentioned before, it is not necessary to say anything specially at the present time. One may say in regard to it all that has been said in regard to the "Memoranda" of Drs. Piffard and Fox. The authors have done as well as possible, when their limited field for description is considered. They are fully capable of presenting a full treatise on the subjects selected, and it is to be regretted that they have not done so. Their book is a very fair exponent in brief, and in very brief, of the diseases considered, but unless one is quite familiar with these departments of medical literature, there is little to be learned from it. It is a "remembrancer," and not a teacher. These medical Primers cannot be recommended. They unquestionably tend to make those who read them superficial, and consequently unreliable.

The Principles and Methods of Therapeutics. By Alphonse Gubler, M.D., Professor of Therapeutics in the Faculty of Medicine of Paris, etc. Translated from the French. Will be issued in a few weeks.

Gubler may be said to have been the most distinguished exponent of scientific therapeutics. Following Trousseau in the professional chair, and a pupil of that great teacher, he took a long step in advance of his master, and may be said to have developed the only method of therapeutics which reconciles the empirical and clinical art of medicine with the demands of exact and logical science. The work will be issued by Dr. D. G. Brinton, of Philadelphia.

Hall's Differential Diagnosis is one of the best works just issued. A review of it will appear in the next number. It is just such a work as is much needed. Reviews of Thomas on Diseases of Women (just issued; fifth edition), and Taylor's Medical Jurisprudence, will also appear The Druggists' Hand-Book of Private Formulæ has just been received. It is a work which will be found very useful and convenient to all who compound their own medicines ; further particulars in next issue, with Press notices of new volumes.

BOOKS AND PAMPHLETS RECEIVED.

Differential Diagnosis of the More Important Diseases. By F. H. Hall, M. D., Westminster Hospital, London, Eng. Edited by F. Woodbury, M. D. Philadelphia : D. G. Brinton, 1881.

Scarlatina. By W. A. Atkinson, M. D. Philadelphia : D. G. Brinton, 1881.

Surgical Treatment of Cancer of the Rectum. By C. B. Kelsey, M. D. New York: H. C. Lea's Son & Co., 1881.

Catalogue of Medical and Surgical Publications. H. C. Lea's Son & Co.

Hygiene of the Genital Organs: By Roswell Park, M. D. Chicago : Reprint Chicago Medical Journal.

Monthly Index of Periodical Literature. American Bookseller, 1881.

Bibliotheca Medica. Robert Clarke & Co. Cincinnati, Ohio, 1881.

Physicians' Catalogue of Rubber Surgical Plasters and Antiseptic Dressings. Seabury & Johnson, 21 Platt Street, N. Y.

Amblyopia from the Abuse of Tobacco and Alcohol. C. R. Agnew, M. D., and David Webster, M. D. New York, 1880.

Reports of Board of Directors and of the Medical Superintendent of the Western Lunatic Asylum of Virginia, Staunton, Va.

A Treatise on Surgical Diagnosis. By A. L. Ranney, M. D. New York. Wm. Wood & Co. 1880.

The Druggist's Hand Book of Private Formulas. By John H. Nelson. Seventh Edition. Cleveland, Ohio, 1880.

Thomas on Diseases of Women. By T. G. Thomas, M. D. New York. Fifth Edition. H C. Lea's Son & Co. 1880.

Diagnosis and Treatment of Ear Diseases. By Alfred H. Buck, M. D. New York. Wm. Wood & Co. 1880.

Medical Heresies. By G. C. Smythe, M. D. Philadelphia. Presley Blakiston & Co. 1880.

How Persons Afflicted with Bright's Disease should Live. By J. B. Edwards, M. D. Philadelphia. Presley Blakiston & Co. 1880.

Taylor's Medical Jurisprudence. By Alfred Swaine Taylor, M. D. Philadelphia. H. C. Lea's Son & Co. 1880.

Appleton's Magazine. Lippincott's Magazine. Scribner's Magazine. Littell's Living Age. The Eclectic Magazine. The Scientific American. St. Nicholas. North American Review.

Diagnosis of Eye Diseases. Samuel Theobold, M. D. Baltimore, Md. Reprinted from the Maryland *Medical Journal*, Dec. 15th, 1880.

The Surgical Treatment of Intestinal Obstruction. By W. T. Briggs, M. D., Nashville, Tenn. Reprint from the Nashville *Journal of Medicine and Surgery.*

Report of the Board of Health of the State of Louisiana for the year 1880.

Ninety-eighth Annual Catalogue of the Medical School of Harvard University, 1880–81. Cambridge. 1880.

The Twenty-second Annual Report St. Luke's Hospital, New York. 1880.

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TRANSLATIONS.

"Ubi mel ibi apes."

Washing Out the Stomach as a Means of Treating Diseases of that Organ, more especially in the Case of Dilatation of that Organ. By Dr. BUCQUOY. *Gazette Hebdomadaire*, 1880.

I have frequently found it necessary in dealing with some of the numerous varieties of diseases of the stomach to use a method of treatment which, if not new, has been applied very exceptionally. I refer to the withdrawal of fluids contained in the stomach, and the systematic washing out of its cavity. The difficulty of application and the serious inconveniences attendant upon the use of the method set forth by Kussmaul have prevented its general acceptance ; to-day, in the siphon of M. Faucher, we find an easy and inoffensive means of practising washing out of the stomach, and this means of treatment cannot fail to become general when its advantages are demonstrated and the indications for its use are clearly shown. The following case, in which washing out of the stomach gave results as valuable and prompt as they were unexpected, has led me to call attention to this important but much neglected therapeutic measure :

CASE.—Toxic gastritis, ulceration of the greater curve of the stomach, followed by stricture of the pylorus, considerable dilation of the stomach cavity, with hypertrophy of its walls. Marked improvement under washing out of the stomach. Death from tubercular phthisis complicated with pneumothorax. A patient thirty-two years of age, travelling merchant, entered the Cochin Hospital on the first of January. The patient was of a very robust constitution, weighing according to his own account two hundred pounds. He had always enjoyed good health until about ten months before admission, when he had accidentally swallowed about (according to his own estimation) a tablespoonful of nitric acid. Almost immediately an atrocious pain seemed to tear his œsophagus, stretching to the epigastrium.

The pain was so violent as to cause delirium during the night. Admitted the following day at La Pitie, he was at first under charge of Dr. Lanceraux, passing three weeks later under the care of Dr. Verneuil, who treated him for stricture of the œsophagus and combatted the dysphagia by means of progressive dilation. No alimentation was practicable except liquids, milk, broth, etc. Wine was not well borne. The patient quitted La Pitie at the end of the month of August and thenceforth continued to use an œsphogeal bougie and live on broth, milk, and meat juice, decreasing however greatly in weight. Every fifteen days he was seized by frightful gastric crises, accompanied with vomiting of alimentary substances. These crises became of greater occurrence, finally appearing every day. Latterly blackish flakes made their appearance in the vomited debris, and even coagulated blood. On the admission of this patient to the Cochin Hospital these crises were exceedingly violent, amounting to absolute intolerance of the stomach for any food whatever, and the emaciation and cachetic appearance of the patient were well pronounced. The face was markedly emaciated and pale, the voice being broken and feeble. During examination the patient was seized with vomiting and threw up quite a quantity of an aqueous liquor of a sour, almost insupportable odor, mixed with curds of soured milk and fragments of undigested food. The epigastric region was exceedingly distended and was the seat of sharp darting pains awakened on the slightest pressure. Percussion was tympanitic all over the epigastric region. The rest of the abdomen boat shapedly depressed and rather sunken offered a very marked contrast to the upper portion. There was persistent constipation. Œsophageal catheterisation easily practiced by the patient himself showed that marked œsphageal constriction no longer existed. No other phenomena elsewhere which would lead to the suspicion of lesions at other points. Examination of respiratory organs in particular gave purely negative results. The chief fact resulting from this examination was that we were in presence of a patient dying from hunger, and in whom inanition was causing marasmus. With this knowledge of the case nothing was more easy than to follow the chain of phenomena. It was evident that the corrosive action of the nitric acid had extended to the stomach, but with this remarkable peculiarity, that its extension had been extremely slow, for during the four months of the patient's sojourn at La Pitie the gastric symptoms appear to have been of but little importance, since all attention was direct to the œsophageal stricture, the treatment being purely surgical. There had been then above all an inflammation of the œsophagus, caused by the directed action of the acid on this canal; but when this man came under our observation there had succeededed to the æsophagitis an acute inflammation of the stomach, a toxic gastritis, the symptoms of which were as follows: sharp pains at the epigastrium frequent violent gastric crises, vomiting of food, then of the liquids contained in the stomach, finally hæmatemesis and black vomit. There was no more dysphagia. The phenomena of inanition so apparent were the result of gastritis and the impossibility of accomplishing stomach digestion. Physical means of exploration showed an enormous dilatation of the gastric pouch and meteorism was frequent and easily perceived.

The increased size of the stomach and the quantity of liquid contained in the cavity, furnished me with the principal therapeutical indications. It seemed urgently indicated to me that the stomach should be acted on directly, and this was most easily accomplished by means of washing out the stomach by means of the Faucher apparatus. This operation caused the patient to reject an enormous quantity of an insupportably sour-smelling liquid. The organ once empty it was washed out first with Vichy water then with ordinary water until the liquid returned perfectly limpid. Half an hour later the patient took a small quantity of milk. The washing out of the stomach, easily practiced and perfectly supported otherwise, was repeated regularly twice a day. Thanks to this treatment, the patient two days after was able to take bread and milk and then eggs and broth, and on the nineteenth he was given a little meat; stools, regular though slightly infrequent, replaced the almost absolute constipation previously existing.

January 19th, the patient's weight had very markedly increased. The use of the Faucher apparatus gave for some time excellent results, but the amelioration was but temporary. Soon the patient became once more cachectic and emaciated and in less than a month the patient had very markedly decreased in weight and we once more found ourselves in presence of new dyspeptic phenomena. At the same time the patient was attacked by cough and night sweats; there were evident physical signs of tuberculosis in the right side. The tuberculosis made rapid progress, and under its influence the function of the stomach altertered more and more in spite of well-borne washings of that organ. Under these complications the patient appeared to sink rapidly, and later on he was a prey to an intense dyspnœa. Struck by this phenomenon, I examined and found the ordinary signs of pneumothorax occupying a large stretch of the left side, hitherto the least affected. This complication was present only two days at most, and the patient died the following morning with all the phenomena of asphyxia. On our opening the body the stomach presented the appearance of an enormous sac occupying all the upper half of the abdominal cavity, epigastrial, hypochondrial and umbilical regions. Half full of liquid, it formed a pouch much more resistant than would be imagined from its condition of distention. This circumstance was due to a general hypertrophy of its parieties, the latter being most pronounced at the beginning of the lesser curve. The transverse diameter of the stomach was fourteen inches, the vertical about ten. Its cavity contained about two quarts of a pretty clear fluid, mixed with small masses of curdled milk and small flakes of matter, black, greyish, and coffee-colored. There were two principal lesions observable at the opening of the stomach, one at the middle of the lesser curve, a round ulcer about the size of a gold dollar of a somewhat irregular shape, with thick borders, the base of which was formed by a thick bed of muscular fibres. The lesser curve measured no more than three inches and was thickened and indurated.

Secondly, at the pyloric orifice there was found a stricture in the shape of a canal, narrowest at its two extremities, where a pen-holder could hardly be introduced. A sort of valvular fold of mucous membrane covered the pyloric orifice. In accordance with this stricture was a considerable muscular hypertrophy and thickening of the connective tissue.

The mucous membrane of the stomach appeared to have undergone a species of maceration and presented here and there hæmorrhagic erosions, beneath which were to be found considerable increase of muscular tissue. The large fatty liver weighed five pounds. The œsophagus presented no appearance of stricture nor even apparent cicatrices. The mucous membrane seemed to be white, limber and thin. A large number of *red and voluminous glandular swellings*, were noticeable at the base of the tongue and along the parieties of the pharynx, venosities, and even varicose vessels were noticeable along the same place.

On the left side of the respiratory apparatus the pneumothorax had pushed the lung back. At the apex was a superficial caseous nodule, but no trace of perforation could be found.

The lesions were more advanced and extensive on the right. There was consolidation and partial softening in the upper lobe, dissemination without excavation of caseous matter in the two lower lobes. In that side, also, were to be found some tubercles in processes of softening underneath the plearal, protected by adhesions.

This observation, reported with some attention to detail, offers certain questions equally interesting from a therapeutical and pathological point of view.

The first thing noticeable is the dysphagia, which was very predominant during the first period of the disease and required œsophageal catheterization for a long time.

The action of a caustic alkali generally results in an œsophageal stricture. I have seen this follow even the use of boiling soup, at Mechon's clinic, in 1851. In this case, in spite of the cause and the phenomena of dysphagia, no trace of stricture or even of cicatricial tissue was found in the œsophagus. The mucous membrane was thinner and more limber, and it is to these joined to the spasm of subjacent muscular tissue that the obstacles to the passage of food so long present must be referred. The stomach was the seat of a double lesion, an ulcer at the origin of the lesser curve, and pyloric stricture. To these principal lesions should be added a considerable hypertrophy of the walls of the stomach and considerable dilatation of its cavity. If we seek to establish a relation between the different lesions we must admit without hesitation that the original affection has been an ulcerative gastritis of traumatic origin, followed by the consecutive phenomena of stricture of the pylorus and gastric hypertrophy and dilatation. As symptoms of ulcerative gastritis we had the epigastric pains felt after the accident and during his whole stay at La Petit, the difficulty of being nourished other than with milk and meat juice, the very violent crises which finished by becoming almost continual at the time of his admission at the Cochin Hospital, finally the black vomit, and at times the hæmatemesis. This symptom atology which reproduces the principal traits of simple ulcer of the stomach, cannot in this particular case indicate anything else than an inflammatory erosive lesion of the gastric mucous membrane. The consequence of this inflammation has been, as I have said, the *stricture* of the *pylorus* and the *dilatation* of the *stomach.*

Could the considerable stricture of the pylorus have been foreseen? No for the pains and the vomiting pointed to cancer of the pylorus as a more satisfactory and legitimate explanation of the phenomena.

This complication should not be, however, very astonishing, for if stricture of the pylorus is so frequent a consequence of cancer of the stomach, it is also encountered very frequently independent of this affection. Rilliet recently published a case in which stricture of the pylorus resulted from a simple gastric ulcer.

In the present case the stricture is clearly the result of the ulceration seated on the lesser curve, near the pylorus, and it is in a similar manner that the cases reported by Rilliet, Kussmaul, and others have occurred.

Secondly, the dilatation of the stomach which occurred in this case was clearly due to gastritis and stricture of the pylorus, but the stomach was not only dilated, its parieties were markedly hypertrophied, the muscular tissue being at least a fourth of an inch thick; this dilatation being clearly due to stricture of the pylorus. But is dilatation of the stomach always due to stricture of the pylorus? This was for a long time the opinion, until Duplay, pére, showed that dilatation of the stomach may exist with stricture of the pylorus, and in many cases reported by Mouchard, Lieutard, and Andral, it was found to be due to a simple gastric ulcer.

Duplay, Andral and Rilliet consider that the dilatation of the stomach was due to the destruction of the muscular fibres in the vicinity of the pylorus having for its consequence paralysis. I can scarcely believe that partial destruction of some muscular fibres would be sufficient to interfere with the peristaltic movement. Inflammation, in my opinion, is alone sufficient to paralyze the muscular fibre and produce dilatation, whether directly or indirectly. This observation naturally leads to the consideration of some details relative to dilatation of the stomach with special reference to the question of washing it out. The causes of gastric ulceration are numerous and varied, the most important have been already considered. Gastric dilatation does not always result from as evident alterations as these, however, for there is a temporary gastric dilatation in hysteria and other nervous diseases. Frequently the overloading, that gluttons subject their stomachs to, is the cause. This was notably the case with Louis XIV.

The numerous varieties of atonic dyspepsia often occasion dilatation. In such cases the lesions are but slightly marked, and are often imperceptible, so functional disease is invoked as the cause of the trouble. This functional trouble consists in important modifications of the secretion of the mucuous membrane, which are the cause of a more or less persistent irritation of the gastric glanduler system, and the affection is most frequently called *chronic gastric catarrh.* There exists between this gastric catarrh and the muscular paralysis producing the dilatation the relation of cause and effect, for through the mucous catarrhal inflamations do not act so rapidly as the serous to produce paralysis of the muscular fibres their action is not less certain. Duplay cites influence of senile chronic catarrh of the bladder in producing paralysis of that organ as an instance in point.

It is on the fact, that chronic irritation of the gastric mucous membrane produces paralytic phemonena that Kussmaul found his treatment by the stomach pump. This is the general opinion among the Germans. Oppolzer, in particular, regards chronic gastric catarrh as a frequent cause of dilatation, and believes that while with temporary gaseous dilatation there is temporary enfeeblement of the muscular fibres these may, under the influence of chronic irritation, undergo perceptible alteration. Dilatation of the stomach, therefore, although classed among the diseases of this viscus, is only a secondary phenomenon of certain pathological states. Its symptoms, weight and dull pain above all after eating or drinking, painful or painless contractions of the stomach, accompanied with nausea regurgitations of liquid lor food, or very abundantly, gas. The patient complains of a burning sensation in the stomach and œsophagus and latterly of chills. Little by little, liquid accumulates in the stomach, at times vomiting, the latter is repeated as in the case cited at first, every fifteen days, then every week, then every day. The quantity is out of proportion to the solid and liquid food injected. The vomited matter of food, though mixed with undigested matter, is usually a liquid of a variable consistency, having a sharp, rancid and disagreeable odor, its surface being covered at times by a greenish flake. Sarcina are at times found in it. The stools are very unfrequent. The results furnished by a local examination of the stomach vary as the organ is empty or full. The stomach often dilates so much as extend below the umbilicus. Palpation circumscribes a round, rather regular, slightly resistant tumor which extends from left hypochondrium toward the left iliac spine and describing an arc of a circle toward the right hypochondrium. The position of the patient modifies percussion, the gas being in the upper, the liquid in the lower parts. The clear sound given on percussion takes on ofter a silvery tone, a hydro-æric sound due to the presence of gas and liquid. On auscultation the peculiar *gluck-gluck* sound can be heard on causing the patient to drink. Beside the local, there are constitutional symptoms of some importance. Whatever be the cause when this pathological condition persists, digestion is laborious and imperfect, appetite diminishes, alimentation becomes difficult, the patient emaciates so that it is difficult not to believe him the victim of an organic gastric affection.

There is also frequently found the nervous complications so well described by Beau, vertigo, sensations of formications neuralgia and hypochondria. Frequently the dilatation is not regarded as the cause of these affections the dilatation being often so slight that its recognition is difficult. Sometimes, however, it is so enormous as to lead to scarcely credible errors in diagnosis. Duplay cites a case where the dilatation was taken for an ascites and punctured. Bonnel and Jordan report cases where it has been taken for pregnancy.

The problem which dilatation of the stomach presents resolves itself into this, is the disease simple and due to an curable affection of the stomach, or is it due to an incurable disease like cancer?

On some cases diagnosis is easy, in others difficult, for many of the symptoms of cancerous cachexia are also found in the chronic affection. The long duration of the disease is not a sufficient guarantee against cancer, which often proceeds slowly. Accord to Leven this question can be settled by watching the case and observing the action of the stomach. When cancer is present the stomach will not tolerate solid food, and will finally reject even liquid. In simple dilatation, regimen will often stop the vomiting. The time, however, is not far distant when washing out of the stomach will be used as a means of determining the existence of cancer. Numerous well-observed facts already reported tend to show that by this means of treatment the patient will not only be improved, but all the cachectic appearance will disappear. Would it not, therefore, be excellent test evidence that when these effects are obtained the disease is not of cancerous origins. There are cases, however, where an error in diagnosis appears to be unavoidable, of which the following case recently reported by me (*France Medicale*, 1877,) is an excellent example. A young man, eighteen years of age, always enjoying good health, came to Paris to engage as a house servant ; three weeks after he was taken suddenly with vomiting and ejected a small quantity of pure blood. On his admission to the Cochin Hospital some days after, I found in addition to the preceding symptoms pain at the xyphoid appendix, and very great gastric dilatation. The suddenness of the attack, the age of the patient, the hæmatemesis forced me to the conclusion that the trouble was due to a gastric ulcer and gastric dilatation, and led me to use Kussmaul's treatment of evacuation of the stomach by the stomach pump and washing it out with alkaline liquids thereafter, only. Temporary improvement, only however, followed ; the rapid enfeeblement and emaciation of the patient soon showed the cancerous nature of the disease. The patient died seven weeks after, and the autopsy confirmed the last diagnosis. As we have seen chronic affections of the stomach considered from the standpoint of prognosis are, on the one hand benign and curable, on the other, necessarily fatal. It is certainly rather strong to call the first benign, for dyspeptic diseases are known to be very intractable to treatment. Means for treatment are certainly not lacking, but as has been well observed, the richness of the pharmacopaeia in remedies for certain diseases is an evidence of their intractibility. The principal indications for treatment are drawn from the symptoms that serve to distinguish the varieties. Gaseous acid eructations as well as the spasms that accompany them, are often combatted by alkalies, pepsin, Beloc's charcoal, etc. To excite appetite, bitters and tonics are given ; for the paralysis causing dilatation, strychnine or nux vomica, or electricity. Dietary precautions and general means of treatment like hydrotherapy and mineral waters complete the treatment. What happens most frequently in spite of a well-instituted treatment, in spite of all care taken by the patient to adhere to rules laid down for them, is that the disease persists, improvement and relapses succeed each other,then the time arrives that the stomach functionates worse and worse the patient grows feeble, his nervous system is affected, and many painful symptoms appear, and the patient has a deep sense of discouragement too often shared also by the physicians. Is not this a picture frequently observed among dyspeptics, more particularly when dilatation is added to the symptoms. Dilatation of the stomach becomes an indication in particular that the contractible powers of the organ are enfeebled. The insufficiency of the means hitherto used, has led me to study the method of treatment already indicated Kussmaul at the Congress held at Frankfort-on-the-Main in 1867, made known a new method of treating dilatation of the stomach by introducing a bougie into this organ, emptying of its contents by means of a stomach pump, and washing it out with a suitable liquid. Kussmaul, in a paper published in the *Archives de Medicine*, 1870, lxv. p. 445-557, has shown how he practices this means. A young girl was subject for a long time to grave dyspeptic symptoms and an enormous dilatation of the stomach, which after copious vomiting still remained full, Kussmaul noticing this across the abdominal parieties, the idea struck him to evacuate the stomach in order.

First, to obtain a more complete evacuation of the stomach without pain and the struggles accompanying vomiting.

Second, to avoid the repletion of the organ leading to an increased dilatation.

Third, to attempt direct treatment of the gastric mucous membrane.

Unhoped for success crowned the efforts of Kussmaul, and his method was adopted by his colleagues Niemeyer and Bartels, and laterly by Lieberneister in the clinics of Lubergen and Kiel.

It is to Kussmaul therefore belongs the honor of having first used the stomach pump in certain diseases of the stomach. Without mentioning Boerhaave, who advised the injection of a liquid, we find a French physician, Casimir Renault, proposing in 1802 to empty the cavity of the stomach by the stomach pump. "Nothing is more easy to imagine," says he, "that the same instrument which is used to fill the organ, can be used to empty it." Dupuytren, and some English physicians speak simularly. Thus, though neither the evacuation of liquids nor the manner of using it was anything new, the merit of Kussmaul consists in his having made use of this means to treat an affection hitherto treated solely medicinally, dilatation of the stomach. The reports of his followers show that when the dilatation was curable, recovery was rapid and complete, but even where it was incurable, as in case of cancer, great relief was obtained. Kussmaul's method was widely known in Germany long before the French physicians took it up, which came from occurrences of the year of 1870. In 1873 Louraduor-Pontul published under the title of "*Studies on the etiology aud pathogeny of stomach dilatations and their treatment*," a pretty complete account of the treatment. It required, however, ingenious modification of the siphon made by Faucher's apparatus was submitted to the Academy of Medicine (November 25th, 1879,) by its author. The case I reported is one of the first in which it has been used in our hospitals. Before dealing further with the Faucher's apparatus, let us return to Kussmaul's method still the most generally used. It consists in.

First, introducing into the stomach and œsophageal sound.

Secondly, apply to this sound either directly or by means of a tube an aspirator pump or something answering that purpose.

Third, after having removed the liquid contained in the stomach inject a certain quantity of Vichy water or solution of soda which can be again withdrawn.

The usefulness of this method of treatment is apparent at one glance. The possibility of removing liquids accumulated in the stomach permits us at will to relieve matters, the noxious qualities of which are very evident with the result of great relief to the patient, and sparing him painful after sensation. In the second place it relieves the muscular fibre of the strain which has caused them to lose their tone and thus diminishes the dilatation of the organ. Finally it proves the regulation of digestive work by preventing food from being mixed with secretions of the mucous membrane, acting as a hindrance to digestion. To the advantages of the mechanical substraction of accumulated matters is added on the other hand the advantages of injection directly into the stomach. These injections permit the direct washing out of the cavity and the employ of direct means of treatment. A simply washing out relieves the mucous membrane of the delutes and excites muscular contraction, two things favorable to digestion. The use of alkaline solutions, and of Vichy water in particular, increasing the efficacy of the washing out, the alkalines acting in the solution of the macosities and act favorable on the gastric secretion. By washing out the stomach with alkaline solutions, the local affection is treated directly, the remedies being applied to the mucous membrane. Theo. Kussmaul, beside the use of soda bicarbonate, has often used hyposulphate and borate of soda and creosote water. Solutions of nitrate of silver, carbolic acid, chloral, etc., have also been injected for the purpose of arresting fermentation destroying sarcina and combatting chronic gastric irritation.

Kussmaul uses the pump of Weisse. The ordinary stomach pumps do as well, and I have often used a hydrocele syringe. In addition to its advantages the operation offers certain disadvantages of injury, and wounding the parities of the œsophagus, stomach, etc. These inconveniences can generally be foreseen, and in most cases prevented. In adopting Kussmaul's method many physicians have ingeniously modified it. To avoid the forceful action of the pump, attempts have been made to replace by it a siphon. Thus Jurgensen after having introduced the œsophageal sound, uses a rubber tube about a yard or a yard and a half long to act as siphon. Schuffner Hodgen and Ziemssen, all have attempted the same principle, but employ different means to make the siphon work. Jurgensen places the patient across a chair, then gets him to attempt to cough or vomit, thus bringing the siphon into action.

Hodgen first fills with water the whole apparatus and plunges the extremity of the tube into a vessel filled with water, but lowering or elevating, which in relation to the pit of the stomach the liquid enters or is evacuated. Ziemssen pours water through a funnel into the tube elevated above the head of the patient.

The tube filled and carried into the stomach, one end is placed in a vessel filled with water and the siphon acts promptly. In France this system of medication was used but rarely, and much objection was made to its use. Dr. Fancher devised a new procedure which consisted in substituting for the œsophageal sound an elastic tube, soft and supple, to act as a siphon; being called to wash out a stomach attacked by chronic gastric ulcer with dilatation. He made his first attempt by means of Ziemssen's method, which on two occasions attended by great pain to the patient. The idea then struck him to use a soft tube. He took a tube of English rubber a yard and a half long and about a third of an inch in diameter, with walls about an eightieth of an inch thick. At one extremity of the tube there was an eye to serve as an orifice if it became stopped, at the other extremity was a funnel of glass or metal of a pound capacity. Oser, in Vienna, independently made use of a similar apparatus. The tube is used as follows: It is slightly damped with water (some use substances to produce nausea), the patient takes the pee extremity of the tube carries into the pharynx, pressing slightly and making deglatitory movements, he repeats these several times, it glides down easily and the patient stops it when he sees near the lips a line marked about a foot and a half from the pee. To use the siphon he puts alkalized water into the funnel, and having filled it, raises it above his head so that all the liquid enters the funnel is lowered to the pit of the stomach, and the vessel there placed is soon filled. My experience has been at the first trials, the patients work equally with the œsophageal tube, but latter acquire great skill in the use of the soft tube. This apparatus fulfils all the indications of Kussmaul's without its inconveniences. I never hesitate at present to use this very simple means to treat both the affection I have called curable and the cancerous disease.

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CHEMISTRY.

"Diruit ædificat, mutat."—Hor.

Aconitia.—Aconitia is perfectly successful in such forms of facial neuralgia as are not correlated with other lesions, which are not intermittent, and which have not a well-marked recurrence; in other words, in those forms to which M. Gubler has applied the term congestive, and which are most frequently caused by exposure to cold. In such cases aconite produces a rapid cure within two or three days. Dr. Oulmont has even seen a case of facial neuralgia of seven days' standing, in which there was no well-marked periodicity, and which had resisted sulphate of quinine, yield instantaneously and permanently to a quarter of a milligram of nitrate of aconite. The results are more marked and rapid in cases of recent neuralgia than in those of long standing. Examples are quoted, however, in which the affection had lasted for periods of one month, two months, and even five years, but which had yet been cured, the first on the seventh day, the second on the third, and the last in three weeks. Aconitia has also a distinct effect in secondary neuralgia, as, for example, in dental caries, otitis, paraplegia, &c. Acute rheumatic arthritis may be successfully treated with aconitia. On account of the energetic action of the remedy the susceptibility of the patient should be tested by administering, in the first place, three pills daily, each containing a fifth of a milligram of crystallized aconitia in addition to five centigrams of pure quinine; one in the morning, one at midday, and one in the evening. If no alleviation of the pain is experienced on the first day, the dose may be cautiously augmented by a pill per diem, until a maximum dose of six in the course of twenty-four hours is attained, and in the majority of cases it will not be necessary to overstep this limit.

SULPHITES.—The elaborate researches of Prof. Polli, of Milan, seem to afford conclusive evidence as to the great power of sulphurous acid as an internal antiseptic, when administered in the form of sulphite of soda. He found that animals could, without any apparent ill-effect, swallow and absorb large doses of the sulphites; and it was observed that when these animals were killed, their bodies long resisted the putrefactive process, and that, whilst an animal killed under ordinary circumstances exhibited rapid and marked signs of putrefaction, an animal which had previously absorbed doses of the sulphites betrayed no signs of putrefaction whatever. Again, in a series of experiments, in which no less than 300 dogs formed the bases of the deduction, Prof. Polli showed that the sulphites exerted a *prophylactic* and *curative* power when septic poisons were introduced into the economy. As regards the human subject, he found that the stomach would tolerate large doses of the sulphites of soda or magnesia, which "were tried in the various eruptive fevers, intermittents, typhus, typhoid, pyæmia, puerperal fever, dissection-wounds, malarial fevers, &c. The records of cases treated in this way showed an extraordinary amount of success." According to Ringer, moreover, "so powerful is the antiseptic action of sulphurous acid, when introduced into the system, that sulphites administered by the mouth will, it is said, prevent decomposition and putrefaction of urine in the bladder." Here, then, we surely have an internal antiseptic of great and undoubted value, and which, under the circumstances, would certainly seem to merit a more extended and careful trial, as a prophylactic and curative remedy.

IODOFORM.—I have just dismissed from under my care, cured, a case of varicose ulcer that had defied the patent ointments that are so much advertised, and had also been under the care of several medical men. Iodoform dusted over the sore twice a week, and a daily dressing of boracic acid ointment, soon made a change in its appearance; and in about fourteen days it healed, and the patient describes the limb as being quite free from pain—a thing quite new to her. A year ago, I had an old soldier under my care with an ulcer of the size of half-a-crown upon the outer aspect of the right leg, four or five inches above the ankle-joint. It first formed in the Crimea, during the first bombardment of Sebastopol, and followed a blow from a splinter. For some years he took little notice of it, merely keeping it clean. Latterly, he had dressed it with all the patent ointments he saw advertised. It was an ugly, unhealthy-looking ulcer, discharging freely, and was very painful both during the night and when walking. Its depth varied ; in the centre, it was quite an inch and a half. Its edges were irregular. The leg was free from varicose veins; and the man was temperate. His occupation entailed much climbing, and he had the ulcer often struck by pieces of timber. I first dusted it with iodoform daily; in a week, every other day; and then twice a week. The effect was marvellous; for in six weeks the ulcer healed, and to this day continues well; the cicatrix is firm; and the man can follow his occupation and take long walks without any pain or inconvenience. I am certain that no other treatment would have healed this ulcer. I have found boracic acid ointment alone to do wonders with ulcers; but, with the addition of iodoform sprinkled on the sore, much more can be done.—*Dr. W. Easby*, *British Med. Journal.*

Rhubarb Test Paper.—M. Lacour has invented a new test paper. He adds to powdered rhubarb twice its weight of liquid ammonia, and after maceration for a quarter of an hour filters the liquid. Strips of paper dipped into it are dried, and are of a red purple color. These when touched with acids become of a lemon yellow, and with alkalies their former color. It is said to be a very sensitive test.

Something Curious about Glucose.—A foreign pharmacitical journal states that it has recently been discovered that a minute fungus, *Mucor circinelloides*, common in horse dung, will cause fermentations in solutions of glucose, while it does not affect that of cane sugar. This fact has been taken advantage of to separate cane sugar from molasses, the glucose undergoing fermentation, and thus allowing the cane sugar to crystallize out.

Falling of the Hair.—Mr. James Startin, in the *British Medical Journal*, suggests the following application in general loss of hair without obvious cause :

℞ Vaselini,
Ol. ricini, . . . āā ℥ ss.
Hyd. ox. rub., . . gr. v.
Liq. ammon. fort., . f ʒ ss.
Ol. rosmarini, . . gtt. v. M.

Oleate of Lead.—One of the best local remedies for eczema is the ointment of oleate of zinc, for which the profession is indebted to Dr. Crocker. Some time ago, with a view of testing its action in the treatment of eczema, I desired Messrs Southall of Birmingham to make for me an ointment of oleate of lead. After a series of experiments they produced an excellent ointment according to the following formula : Lead oleate, 24 parts; heavy and inodorous paraffin oil, 14 parts. The lead oleate is prepared by heating a mixture of oleic acid and oxide of lead.–*Ex.*

For Doctors Outhouses and Fences —The following is the receipt for making the brilliant stucco whitewash used on the outside of the Capitol at Washington : Take half a bushel of good unslaked lime, slake it with boiling water (cover it during the process to keep in the steam); strain the liquid through a sieve, and add to it a peck of salt dissolved in warm water, 3 lbs. of ground rice boiled to a thin paste; stir in, boiling hot, ½ lb. of powdered Spanish whiting, 1 lb. of white glue; add 5 gallons of hot water; let the mixture stand a few days, covered from the dirt, and apply with kalsominer's brush.

THE Pharmacopœia of the British Hospital for Skin Diseases gives the following formulæ:

℞	Sulph. Precipitatis,	ʒ ii
	Kali Carbonas,	ʒ i
	Hydrarg Sulp. Rub,	gr. ii
	Ol. Bergamii,	♏ ii
	Adeps,	℥ i

M.

Used in cases of Scabies. Patient is to be well rubbed first with the *Sapo Mollis. Ph. Br.* for half an hour, and then given a warm bath for half an hour, then rubbed all over with ointment for another half hour. One application sometimes though rarely suffices.

℞	Acid Boracic,	ʒ i
	Adeps preparata,	℥ i

M.

Reduce acid to powder then sieve and finally mix thoroughly with the lard. Very useful in cases of eczema.

℞	Succus Taraxcum,	ʒ i
	Acid Nitro-hydrochloric,	♏ v
	Aqua Distill, qs. ad.,	℥ i

M.

Used as an alterative cholagogue and and laxative in eases of eruptions associated with a bilious cachexia.

Velpeau's Diarrhœa Mixture.

℞.	Tinct. Opii,	℥ i
	Tinct. Rhœi,	℥ i
	Tinct. Menth. Pip.	ʒ x
	Tinct. Capsici,	ʒ v

MS. ʒ ss pro re nata. (Medical student's note; if too much give less the next time.)

Unfavorable to Chian Turpentine.—The following resolution was recently passed unanimously by the Medical Committee of the Middlesex (England) Hospital: "That as the results of a prolonged and careful trial of Chian turpentine in the treatment of cancer prove the drug to be quite useless as a cure for that disease, directions be given to the dispenser not to obtain any more of the drug for the cancer patients."

Plants Deceived by Electric Light.—A curious experiment is now recalled, showing the influence of electric light upon the blooming of plants. It was performed in 1850 by M. Schott, Director of the Botanical Gardens of Vienna, who, to suit the whim of the Emperor Francis Joseph, made the night-blooming cereus flower by day instead of at night. This was done by causing the plant to be shaded, and finally excluded from light during the day, and subjecting it to the action of electric light at night, so that the habit of the plant became reversed, in consequence of which it flowered between nine and ten o'clock in the morning, in July.

Bismarck's Caustic Powder.

Arsenious acid,	15 grains.
Sulphate of morphia,	15 "
Calomel,	2 drachms.
Powdered gum arabic,	12 "

Mix. This is sometimes called *painless caustic powder*, although the propriety of the name is doubted by some.

Lard Butter.—The success of butter made from beef fat (oleomargarine butter) has led to the use in Chicago of pork fat or lard for the same purpose. It has been reported that large quantities of this fraudulent butter have been shipped to England, seriously injuring the market for genuine American butter. The report is disputed by exporters, though it is admitted that sample lots have been sent by New York and Chicago dealers. Obviously if land butter is wholesome and of good flavor it can be sold on its merits; if bad it should not be sold at all. In either case its sale as genuine butter would be a fraud and should be prevented.

Triumph of Steam.—The distance between New York and Philadelphia, in an air line, is 81 miles, over a comparatively level country. In a recent paper before the Franklin Institute, Mr. W. Barnet Le Van maintained that an air line road could be constructed between the two cities, on which trains could make the distance in one hour, and that the enterprise would pay. The line he proposed would cross no roads at grade, and would have but two curves of 10,000 feet radius each.

For articles of rubber which have become hard and brittle, Dr. Pol recommends the following treatment: Immerse the articles in a mixture of water of ammonia one part, and water two parts, for a time varying from a few minutes to an hour, according to the circumstances of the case. When the mixture has acted enough on the rubber it will be found to have recovered all its elasticity, smoothness, and softness.

——o——

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

Antiseptic Dressing of Wounds.—I apply the dressing thus: The protective, dipped in the 1 to 40 watery solution to destroy the septic property of any dust adhering to it, is applied over the healing wound. Immediately over this is placed a piece of the carbolic gauze, dipped also in the lotion, to insure that it is actively antiseptic when applied, for the dry gauze cannot be trusted in this respect, and over this the regular gauze dressing of ample dimensions. Remember the immense importance of having the protective overlapped on all sides by the gauze. The protective, having nothing antiseptic in its composition, must be overlapped just as if it were itself a wound. The attainment of the results depends not only on the efficacy of the antiseptic measures used, but also upon the use of an efficient protective, as we term it —that is to say, a layer of material employed to protect the healing part from the irritation of the antiseptic itself. And with reference to this point, I may mention that we have now a considerably better protective than we had some time ago. It still consists essentially of oiled silk, varnished on both sides with copal varnish. The copal varnish is the principal agent in this protective for keeping the carbolic acid out; it is much less permeable to carbolic acid than oiled silk is, although oiled silk itself is much less permeable to the acid than gutta percha or caoutchouc is. The copal varnish, then, is the most important of the ingredients of which this protective is composed. When it comes to be of the temperature of the body, it becomes perfectly soft and pliable; it applies itself beautifully to the part, so that there is no objection to it on that score. If we had not used a pretty effectual protective, we should not have had the kind of results you have seen in this case. If we had had a carbolic acid dressing acting directly on the tissues of that exposed wound, we should have had before now granulation and suppuration—suppuration occasioned by the irritation of the antiseptic — "antiseptic suppuration," as I have termed it; and if we had had the gauze dressing directly applied to that piece of dead tissue; it would have been impregnated with the pungent antiseptic, and would have become chemically stimulating on the same principle, though in a less degree; as if it had been putrid; it would have stimulated its living neighbors and urged them to granulation and suppuration, and we should have had a piece of dead tissue already separated by antiseptic suppuration. Again, if we had not used a pretty efficient protective, we should not have seen the blood-clot organized and cicatrizing without suppuration at the edge of the window in the skin. We should have seen it with a granulating and suppurating margin, I believe the protective is as yet imperfectly understood.—*Lister.*

Carbolic Gauze as an Antiseptic Dressing.—We have improved upon this gauze of late. The proportions we used of the ingredients were originally one part of carbolic acid to five of common resin, and seven of paraffin, the paraffin being added to prevent undue adhesiveness. We have now changed these proportions to one of carbolic acid, four of resin, and four of paraffin. By that means we have in the first place a gauze dressing with half as much carbolic acid again in it. It turns out that this is not too irritating, and that therefore it is a great improvement; for the gauze is of course more efficacions antiseptically in proportion as it has more carbolic acid in it. From the diminution of the paraffin we have a little more adhesiveness, but that, I think, is positively an advantage. We do not find it causes any serious inconvenience, and, on the other hand, it tends to prevent the disposition of dressings to slip upon the skin; it helps to keep them more securely in place. And then I may mention as a secondary, though not insignificant advantage, that though we thus increase so considerably the proportions of the carbolic acid, which is the most expensive ingredient, we have not added to the cost of the materials as a whole, because pure paraffin is so much more expensive than resin, that by diminishing the proportion of paraffin to the resin, we have cheapened the article more than we have enhanced its price by increasing the quantity of carbolic acid, so that the gauze is rendered slightly cheaper by this alteration of our proportions. The gauze has been employed in the usual manner in eight layers, with a piece of mackintosh under the outer fold; but in a case like this (empyema) we have also used the gauze in large amount in the form of loose-folded pieces underneath. In the earlier stages this is of great importance, because the flow of serum that takes place from the unsupported pleura in the earlier stages is exceedingly copious; therefore we have made the mass of gauze more than usual. In the adult it becomes necessary to change the dressings twice a day in these cases, but in this child, the discharge being of course much less, once in the twenty-four hours has proved sufficient.—*Prof. Lister.*

LISTER'S ANTISEPTIC SYSTEM.—*Carbolic Acid.*—Up to the present time Mr. Lister has found carbolic acid the most efficient agent for carrying out his system. Of the several varieties of acids in use, he recommends *absolute phenol*, the granular form of which seems the most convenient to work with. The reason for this preference is the purity of the substance, which forms clear lotions, free from all unpleasant odor, and less irritating to the skin of the patient and the surgeon's hands. Should a cheaper variety of acid be used, on economical grounds, the No. 3 acid seems the most suitable, but it is advisable that its solutions should be filtered through several ply of muslin. Though carbolic acid is termed an *acid*, there is chemical evidence in favor of its partaking of the characters of an *alcohol*, and hence the term phenol, which it has obtained under this latter view, is synonymous with the more general one of carbolic acid. For practical purposes the readiest test of the purity of carbolic acid is its solubility in water, and this is indicated by its pungency, and by its effect on the skin, a pure 1-40 solution being scarcely, if at all, inconvenient to the hands. The carbolic lotions in use in the antiseptic system are two *watery* ones, two *oily* ones, and a *spirituous* one, for a special class of cases. The urine of patients dressed with antiseptic dressings may become blackish on standing. This probably indicates the presence of an increased amount of the indican or coloring matter of the urine due to the presence of carbolic aeid in some form in the blood. The most convenient test for carbolic acid in the urine is the ordinary commercial sulphuric acid.—*Dr. G. Beatson.*

NASAL CATARRH.—*Picrotoxine.*—I snuff up each nostril about as much iodoform as would lie on a threepenny piece. I did this about six o'clock in the evening, and about eleven o'clock I was immensely relieved, so that the coryza was markedly diminished. In that short time, my cold had been transported from the cold stage to the stage of resolution. Next morning I was almost well. I resolved to try this drug on various friends and patients, and have done so with great success. The coryza and accompanying pain and discomfort disappeared in a few hours, or in the course of a night. In cases of mild catarrh, I found it made the symptoms a great deal worse. I generally find one application enough, and give a smaller quantity than I used myself.—*British Medical Journal.*

PHTHISIS AND BRONCHIAL AFFECTIONS.—*Petroleum.*— Dr. Milton, of Bradfor, Pennsylvania, several months ago called the attention of the medical profession to the wonderful efficacy of crude petroleum as a remedy in consumption and bronchial affections generally. He has now prescribed the pills made from the crude petroleum in about fifty cases with the most satisfactory results. Bronchial and laryngeal troubles are relieved from the beginning of the first dose. In consumption, it has afforded more satisfaction than any other remedy that he has tried ; in several cases of what might be termed incipient phthisis it has affected a permanent cure, to all appearances. The crude petroleum is a popular domestic remedy in the oil country for most of the ills that flesh is heir to, but more particularly for coughs, colds, and bronchial troubles generally.

EXAMINATION OF THE INTERIOR OF THE BLADDER.—The "*Nietze-Leitner*" *Endoscope.*—By means of this instrument the interior of the bladder can be illuminated and examined. It is certainly a daring achievement to carry a platinum wire heated to whiteness into the bladder, and to use it there for some minutes in the act of research; and it is a marvellous success as regards the mechanical arrangement by which this result is effected with safety. The idea originated with Dr. Nietze, now of Vienna, but its realization is due to the patience and perseverance of Leitner, the surgical instrument maker of that city. There are some morbid conditions the existence of which we sometimes suspect, but cannot positively affirm to exist, whose presence may now be ascertained through the agency of the new endoscope. I refer to the identification of sacculated stone as the cause of persisting and unrelieved symptoms ; to the detection of pedunculated growths and of villous disease of the bladder, removable by operation; and, lastly, to the investigation of the nature of foreign bodies, other than calculi, which have become lodged there. I have lately seen a fatal case of vesical growth which might have been easily removed by operation; and in such a case, as well as in the rare contingency of a foreign body, the new endoscope may possibly render essential service. A precise knowledge of the nature, size, and position of a foreign body might enable us to devise a safe and certain means of removing it, in place of a tentative, uncertain, and hazardous proceeding. — *Sir Henry Thompsou, Lancet.*

A NEW ANTI-NEURALGIC: MENTHOL. —Archibald D. MacDonald, in a paper communicated to the Medico-Chirurgical Society of Edinburgh, by Dr. Taylor, and published in the *Edinburgh Medical Journal*, urges the claims of menthol as a new antiseptic and anti-neuralgic agent. Menthol is the stearoptine of peppermint oil, is a crystalline solid derived from the oil of peppermint by long keeping, or being cooled to a low temperature. The American oil yields it at O°C. Its chief source is the Chinese and Japanese oil. It is imported as Japanese camphor, in small white crystals, which have the peppermint odor, and resembles the sulphate of magnesia. In liquid or solid state it has specific gravity less than that of water. It is rendered liquid and volatile at a temperature one or two degrees below that of the body. Some specimens, however, volatilize, at a much lower temperature. It is very sparingly soluble in cold water. It liquefies slowly in water at 82° F., quickly at 120° F., but remains mostly as a separate layer. It dissolves freely in alcohol, in ether, in the fixed and volatile oils and in glycerine. The author publishes a series of experiments proving that this agent, which is the homologue of thymol, is an antiseptic of considerable power, but says that in Great Britain it will probably not come into general use as an antiseptic; but in India, China and Japan, and even in America, where the objection of small supply and high price cannot apply, its use is more to be maintained. One point is strongly urged in its favor, its volatilization at and a little below the temperature of the body, and its consequent adaptability for penetrating into every nook and cranny of wounds which are already putrefactive; slaying the bacteria, and rendering these wounds perfectly aseptic.

As an anti-neuralgic, the author believes the menthol to be of great value. One-tenth to one-sixth of a grain of menthol steadies the contractions of an excited heart, and slows them to a comfortable speed, and at the same time produces slight cerebral drowsiness. Half a grain of crystals produced vomiting from gastric irritation. The author does not advocate its internal use unless well diluted. He deals with menthol as a local anæsthetic. The application of oil of turpentine in facial neuralgia by the Chinese, was practiced at a very early date; it has also been locally applied for gout, the relief in both affections being almost instantaneous. A priori, the author concludes the oil cures in virtue of the menthol which it contains. Reference is made to seven cases. In the first case, trifacial neuralgia, the affected part was painted with menthol, one grain; oil of clove, ten minims; rectified spirit, fifty minims.. This was done four times in successive attacks. Entire relief followed in from four to six minutes. First a feeling of coldness, and then some irritation from the application was experienced. This case may be regarded as typical ; menthol is particularly advocated as a temporizing remedy until constitutional treatment may take effect. It may prove to be more effective than aconite, veratria or atropia. Its use in toothache was followed by immediate relief. In neuralgia it has been noticed to render the paroxysms less frequent and less severe. In sciatica, the author painted the sciatic, popliteal and tibial nerves to the ankle joint with a ten per cent. solution, and this gave the patient immediate relief.—*Chicago Med. Journal.*

THE MIGRATION OF OVULES.—MM. Duval and Wiet have investigated the mechanism by which the ovules pass from the ovary to the Fallopian tube, in order to ascertain whether ciliary action does not play a part in the phenomenon. They have found that in female frogs, during the sexual period, the peritoneum is covered by an epithelium furnished with vibratile cilia, in active movement. The cilia are absent at other times, and in the male frog. A similar epithelium was found on the peritoneum of cats during the rutting period. M. Sinety has found vibratile cilia on tumors removed from the pelvis of women immediately after the catamenial period ; and therefore it may be assumed that a similar mechanism is also in operation in the human species.

APPETITE THE BEST GUIDE.—I have in a former paper mentioned the frequent desire of phthisical patients for onions, salted and smoked fish, etc. Of those asked, forty had a great desire for onions against eight without such desire. Twenty-six desired pickles and vinegar against four who did not. I can not avoid again remarking on the frequency with which onions are debarred young delicate people and phthisical patients. It is a continually recurring experience with me to hear young people say how great is their desire for onions, and which are often preferred raw, eaten with a little salt ; and it is rarely that I have heard that onions disagree. I conceive that it is of the greatest importance to follow Nature's lead in the matter of the appetite. . . . I conceive, further, that a marked passion for a special food, such as that of the phthisical for onions, puts us on a right path toward further knowledge.—*Medical Press and Circular.*

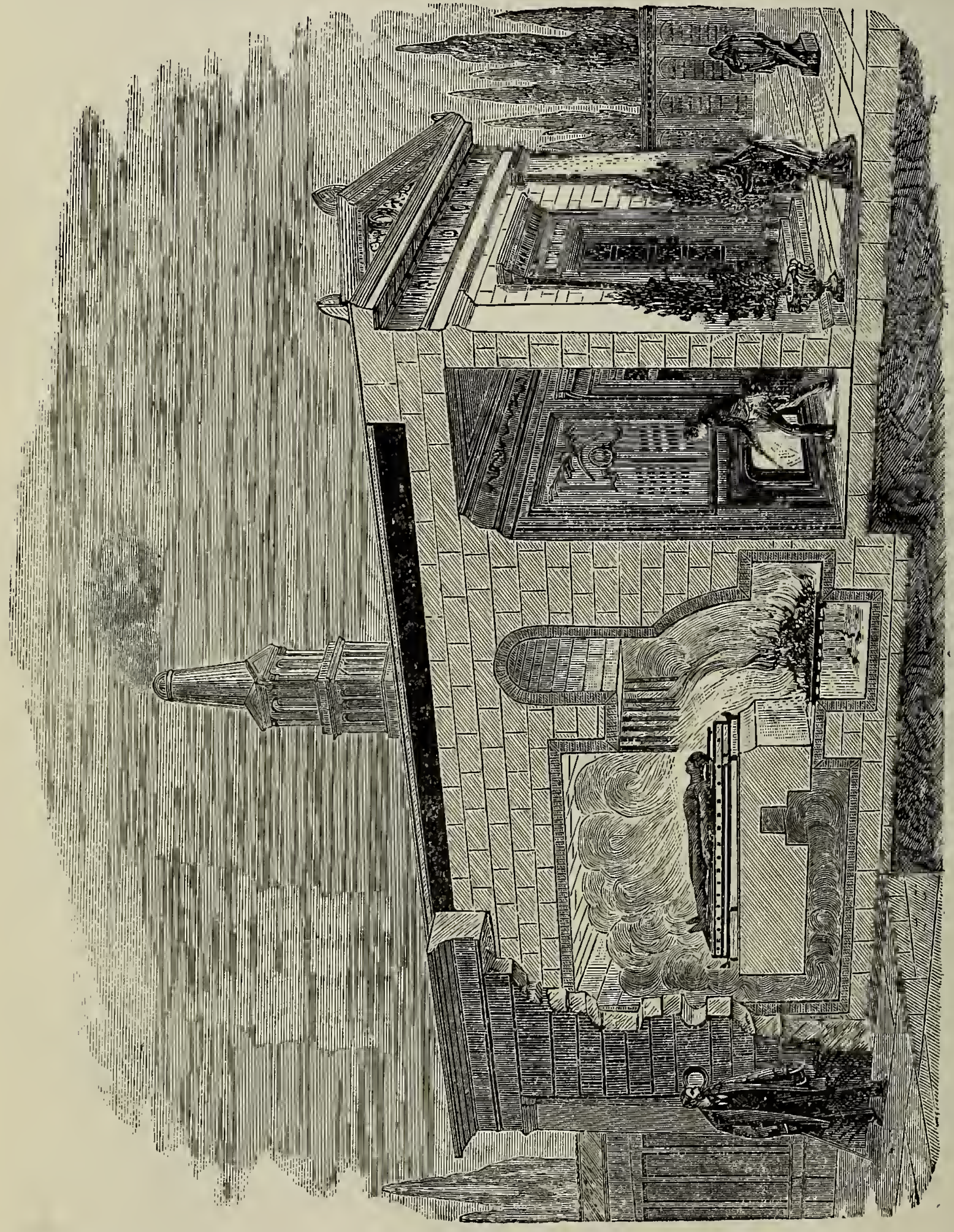
[This is a fair sample of the nonsensical stuff which so many write, so many believe, so many practice, and so many publish.—E. S. G.

A CURIOUS COMPLIMENT to Mlle. Bernhardt is thus paid by the Record : "Mlle Bernhardt's deaths are remarable, artistic, and effective. We must confess to having seen few in real life that moved us so deeply. The death struggles, we may say, were remarkably lifelike, in a certain sense. We have never seen their equal in real death. We can recommend the profession to study the phenomena of the histrionic death as shown in Mlle. Bernhardt; for a physician *may practise all his life and never see anything like them.*"

THE *Medical Gazette* reports a temperature of 131° F. from Dublin. The locality accounts for the high temperature.

Somatic Physics.—A suggestive paper on the applicability of the doctrine of the conservation of energy to biological studies was read at the recent Convention of Electricians at Chicago. The author, Mr. Clevenger, claimed that if any advances are to be made in these studies greater attention must be paid by physiologists to sound, heat, light, and electricity.

CREMATION.—Much has in recent years been written in regard to cremation, but as to the *modus operandi*, the Public has been wholly uninformed. There is presented below an illustrated description of the best arrangement, yet designed, for effecting the purpose indicated.



THE MILAN CREMATION TEMPLE.

The engraving shows the Cremation Temple lately built in the beautiful cemetery of Milan by Mr. Albert Keller. This temple is built in Græco-Doric style, is surrounded by a cupola, forming a chimney through which the products of combustion escape. The furnace is in the basement, and nearly in the middle of the building. The interior of the building is divided into four large halls, in the first of which the mourners assemble before the body is brought into the urn or cremation chamber; adjoining this hall there is a room in which the bodies in their coffins are awaiting cremation. The next apartment is a large storage room for coal and wood, and beyond this are the furnaces. In an adjoining hall the "Cremation Society of Milan" has its office, and transacts all its business. Here is a curious collection of antique and modern vases, documents relating to cremation, models of furnaces, etc.

The cremating furnace is arranged transversely in the temple to permit the watching of the entire operation through a small window in the side wall of the temple, as shown in the engraving.

The body is placed upon a grate, under which a basin is placed to receive the liquids and ashes that may drop down.

Two furnaces are now before the public, known as the Gorini and Venini furnaces, after the inventors.

The engraving shows Gorini's furnace, in which the flames and products of combustion pass over the body, thence down a flue and under the base upon which the body rests, thence up the chimney. The body, thus completely enveloped in the flames, is converted to ashes in from one and a half to two hours. Wood or coal may be used, and the expense is about one dollar.

Mr. Venini's apparatus is more complicated than that of Mr. Gorini, but it transforms the tissues of the body into gases in a more perfect manner than any other furnace known.

CHRONIC ECZEMA OF THE PALM.—The following lotion I have found very beneficial in allaying the intense irritation which so often accompanies this common skin disease. It consists of bicarbonate of soda, 2 drachms; bicarbonate of potash, 1 drachm; glycerine, 1½ drachms; tincture of opium, 2 drachms; water to 8 ounces. I was at first induced to use it in a case of eczematous irritation, in which every application I had used proved of no avail, on account of the marked relief from pain which the local use of the bicarbonate of soda frequently gives in severe burns. Only a few days ago in the case of a lady suffering from chronic eczema of the legs, accompanied with intense itching, I used it with the most beneficial and immediate results, the patient showing me some half-dozen prescriptions which she had used with little or no success. I consider the bicarbonate of soda lotion almost, if not quite, a specific for the relief of the intense burning irritation which often attends chronic eczema, more especially if the patient have a rheumatic tendency.—*Dr. J. W. H. Lush, British Medical Journal.*

THE *L'Union Medicale* gives the following account of the last hours of Frederick the Great: Frederick the Great, it may not be generally known, fell into the hands of a magnetar in his last hours, and of these Dr, Verse traces the following picture. The hall was feebly lighted by torches placed in alabaster vases. At the end of the hall the king, his feet deeply plunged in cushions, was seated in an arm chair covered with green velvet. The king pale, emaciated, gasping for breath, gazed feebly and undecidedly around. The Countess Liehtenan giving him from time to time slight taps on his swollen hands to attract his attention, and to finish the picture this king (who was really dying) was listening to the reading of the "imaginary invalid." Physicians of all kinds, charlatans and men of talent, prescribed remedies to arrest the decline of the vital forces. The latter advised the use of exhalations of unborn calves; the former demanded that the occult sciences should be consulted ; one of them, a famous magnetizer of Paris, an enemy of all drugs and doctors, was presented to the Countess, and drew up for the use of the king certain rules as follows:

I do not regard the condition of the king as that of an invalid but simply as a loss of force, the result of the loss of negative power which is the principle of all life. Medicine offers no remedy for this condition. Nature alone can give remedies sufficient to restore the health and life of the king.

1st. His majesty should forget for at least a month in order to preserve the life dearest to Prussia, that he is king and must therefore abandon to others for that period the cares of government.

2d. He should have every day electric baths of an hour's duration. The first on rising, the second on lying down. During the bath a magnetic hand should be laid on the patient's stomach, and for this purpose Puqsegur should be called from Paris.

3d. Fire should be kept up in the sleeping rooms, the window of which should be kept open, but the fire should not be in a grate. The king should expose himself as much as possible to the vivifying influence of the sun.

4th. From a neighboring room secret music shouid always be heard. Violins are, however, to be prohibited.

5th. His Majesty should not talk much, but should amuse himself with the playing of children, charades, reading of light literature, the gambols of kittens playing with puppies.

6th. Two children from eight to ten years, of healthy color and merry disposition, should be chosen to sleep one on each side of the king ; their pure and healthy exhalations will surround him with a salutary atmosphere.

7th. During the first month the king should take no other nourishment than rice boiled with honey, saffron and sage. If he becomes tired of the diet, I would allow beef and chicken jellies, or even a slightly-cooked beefsteak, but no ragoots, no veal, and above all no fish. He should eat little at a time, but very often.

8th. The king should drink only Spanish wine, and if chocolate does not cause him any acidity, it would be a celestial balm.

9th. Above everything else I should advise his Majesty to wear a Russian hat of fur, and cover his feet with fur also, but to take no drops, elixirs, pills, or other medicines, which are all poisons, and the oil should be thrown into the fire. Whether these orders were followed history does not state ; the king at any rate had a frightful death, but the mixture of sense and absurdity in the prescription is striking enough to call for notice.

On the Influence of Altitude with Reference to the Treatment of Pulmonary Diseases. By WILLIAM MARCET, M.D., F. R. S. (Cannes).

The author accepted the generally acknowledged theory, that cases of phthisis amongst the inhabitants of altitudes exceeding five or six thousand feet were so rare as to be exceptional. He also admitted that such winter-stations as Davos might prove beneficial to consumptive invalids, and had in some cases apparently effected a cure. After reviewing the influence of altitude in disease with special reference to the various descriptions of pulmonary affections, the author proceeded to account for the beneficial effects of such winter-stations as Davos on consumptive invalids. He stated the results of his own experiments on respiration at various altitudes, which had a direct bearing on the present subject, and from which he arrived at the following results: 1. At stations at various altitudes above the sea, a smaller weight of air was taken into the lungs (or a smaller volume of air reduced to seaside-pressure and freezing-point), while more carbonic acid was emitted, especially in a cold climate; and it followed that the oxygen of the air passed through the substance of the lungs into the blood more rapidly or more readily on mountain-stations than near the sea-level. 2. Up to 7,000 or 8,000 feet, the increased volume of air breathed within a certain time (not reduced) was due to a greater expansion of the chest and lungs, and but little, if at all, to an increased rate of breathing, although at higher stations the frequency of the respiration was decidedly increased. The author concluded that the beneficial influence of high winter-stations on the progress of phthisis was due: 1. To the blood becoming more fully charged with oxygen from the air breathed, and to the phenomena of oxidation in the body being increased, thereby promoting considerably the healthy changes in progress in the living body; 2. To the capacity of the chest and lungs being increased—at all events, temporarily—after a winter sojourn in the mountains; and because, on that account, a greater volume of air was breathed after returning to a lower level. This last conclusion was arrived at independently of the observations and statements made by Dr. C. T. Williams, who offered a similar explanation to account for the beneficial influence of altitude in cases of phthisis. —*Lancet.*

Classic Dentistry.—Dr. Xavier Landerer, of Athens, says in the London *Chemist and Druggist*: "It may be safely asserted that the ancients certainly cleaned their teeth and used tooth powder. If the necessary attention was given, relics would be found in the graves of the women. The word *odontotrimma*, the tooth-scouring stuff or tooth powder, is found in ancient Greek, and in the Greek Pharmacopœia is applied to tooth powder. It is interesting to find that the ancients had made some advance in dentistry. A friend of mine (now dead) occupied himself in collecting ancient Hellenic skulls, wishing to show that they did not differ in shape from those now carried in Greece. Among several hundreds of these skulls, some perhaps 2,000 years old, we found two with 'stopped' teeth. One was filled with a mass as hard as stone, which, on analysis, proved to be hydraulic lime, made from volcanic ash, Santorin earth, and lime. Marvellous as it may seem, the hollow of one tooth in the other skull had been filled with gold thread or gold leaf. The metal used was pure. The skull itself, though deprived of the stopping, is now in the Archæological Museum."

Art from a Medical Stand-Point.—An amusing art-criticism in a recent number of the *Medical Press and Circular* contains the following judgment upon a gallery of ideal beauties contributed by famous artists to the London *Graphic*:

"We have stated that bodily as well as mental feebleness is somewhat characteristic of the *Graphic* gallery, and the statement is, we think, borne out by the prevailing wanness of complexplexion. Anæmia is noticeable in several faces, and emaciation in more than one. A certain sickliness accompanies the mental depression to which we have adverted. The pink on Sir Frederick Leighton's canvas is not that of health—on the ear it creates a suspicion of eczema; and those are not the hues of robustness that glow on the cheeks of the maidens whom Messrs. Tissot, Dicksee, and Hopkins have called into being. The really painful case of bodily degeneration, however, is found within Mr. Philip Morris's silver frame. Here we have a white-veiled girl-bride, almost corpse-like, summoning up disagreeable pathological associations. A fragile, scrofulous creature, she turns on us a wistful gaze unilluminated by any ray of hope, and seems to be taking her last farewell of all around her. Her bleared eyes, pinched nose, pallid complexion, and swollen lips indicate, it might be said, only too surely that tubercular disease has already set its seal upon her."

Spina Bifida Treated with Plaster of Paris.—Dr. Lewis A. Sayre, in a clinical lecture, says that the object of mechanical treatment is simply to protect the parts from all pressure and all possible injury until the process of ossification is completed throughout the entire length of the spinal column. This he accomplishes by first slipping over the trunk a tightly-fitting knit-shirt, similar to that used in applying the plaster jacket in Pott's disease or lateral curvature. Then, having the patient held in a firm position, but without being suspended, he passes a few turns of a plaster bandage around the trunk and pelvis in such a manner as to cover the spina bifida completely. After this, he cuts off a piece from both the top and bottom of the shirt, and turns the remaining portions over the part covered with the plaster. He then makes a few more turns of the plaster bandage outside of all, and finally, before the plaster has had time to set, presses in the plaster with his hands on both sides of the tumor, so as to make the covering more cup-shaped, and thus protect it the more completely from all pressure. He then makes a hard, artificial roof for the spinal cord and nerves, which takes the place of the normal bony one until nature supplies the deficiency. If, on account of the child's growth, other similar plaster casings are required, they can be applied in the same manner. He puts the child on a course of phosphate of lime, with a view of increasing the earthy phosphates in its system, and thus facilitating the further ossification of the spinal column.—*Michigan Medical News.*

L'Union Medicale gives the following formulæ :

Anti-Scrofulous Mixture :

℞	Kali Iodid, . . .	ʒ ss.
	Tr. Iodin. . .	♏xv.
	Tannin, . . .	grs. xv.
	Syr. Cinchona, . .	℥ i ʒ v.
	Gum Julep, . .	℥ v ʒ vii.

MS. ℥ i. every two hours to scrofulous adults; children proportionately.

Dobell's Purgative Tincture.

℞	Res. Podophyllin, .	grs. ii.
	Essence Zingiber.	ʒ i. ♏xv.
	Spts. Vin. Recti., .	ʒ ii.

MS. ʒ i. at night when lying down, every two or three nights. Podophyllin is claimed to act mildly.

Kaposi, in *L'Union Medicale* gives the following ointment of lead and vaseline for squamous skin diseases :

℞	Emplastrum Plumbum,	℥ ii.
	Vaseline, . . .	℥ ii.

M.

These are mixed at gentle heat and removed before cooling, and may be perfumed by bergamot, lavender, or Bals. Peru. The author recommends this ointment to detach the crusts and scales in certain skin diseases, and more particularly in eczema squamosum, when the skin is dry and covered with epidermic scales. Even on excoriated surfaces it does not occasion any sensation of burning, and is preferable to Hebra's plaster, because it is inodorous, and does not change when kept long in contact with the skin.

Fatal Heroism.—There have been no nobler instances of self-sacrifice than those recorded of physicians who, to save a patient or to investigate a disease, have taken extreme risks at the cost of their lives. There is, however, a reasonable limit to such experiments, and no physician is warranted in subjecting himself to needless hazards. If the object aimed at can be gained without incurring any special risk it is obviously the part of wisdom to choose the safer way. The spirit which impelled young Dr. Sanford to choose the more dangerous way, and so lose his life, at Greenpoint, N. Y., was beyond question commendable; but his act was the reverse of justifiable.

As the case is reported, Dr. Sanford had been attending a child afflicted with malignant diphtheria, watching the patient day and night. At last the air passages became blocked, and the doctor resorted to the use of the knife. He made an opening in the windpipe, inserted a small rubber tube, and with his mouth sucked out the poisonous exudation. By this act he prolonged the child's life several hours, but put an end to his own.

This is not the first fatal instance of the sort which has occurred in this country, and two or three cases of the same nature have been reported in France. The infectious character of the diphtheric exudation is well known, and Dr. Sanford knew that his life would possibly, if not probably, pay the forfeit for his professional zeal.

Ought he to have taken the risk? More specially, can one justify his taking the risk?

"Certainly not!"

For the simple reason that the deadly material could have been as promptly and as surely drawn off by purely mechanical means. The emergency was not a sudden one, or one that could not have been provided for beforehand. In any apothecary shop the doctor might have bought for a few cents a rubber bulb that would have served the purpose of an aspirator as well as his own mouth, and it would not have suffered infection from the poisonous matter drawn into it.

Our natural admiration for devotion carried to the point of self-sacrifice is apt to make one ask whether the devotion might not better have been manifested in a more rational and equally effective way.

Post-mortem Examination of a Crazy Elephant.—African Jim, an elephant belonging to the St. Louis Zoölogical Garden, died recently after an illness of two months. On the evening of his death he exhibited an uncontrollable desire to smash things and endeavored to tear down the building containing the carnivora. A *post-mortem* examination was made by Dr. Charles A. Todd, who found the body somewhat emaciated.

The abdominal organs were healthy, with the exception of the liver, which was congested and showed abundant signs of old disease—inflammation. There had been an old pleurisy, or inflammation of the membrane covering the inside of the chest and surface of the lungs, which caused both lungs to be closely bound to the chest at every point, so that they were no longer freely movable, as should be the case. The lungs were also partly congested. The brain was the site of the most important pathological changes. The membranes covering it were greatly congested, and the one that lies directly in contact with the nervous substance (pia mater) was markedly thickened (showing old inflammatory disease), the blood vessels passing into it being also thickened and offering considerable resistance in the examination. Other parts of the brain were congested. The congested condition of the brain and its membranes explained the frenzy of the animal on the day of his death; this, however, was but a sudden aggravation of the long standing disease indicated by the thickened membrane and vessels, chronic meningitis, which would have insured a premature death, even if life had not been so suddenly taken off by the last attack. In human beings chronic meningitis is a disease difficult to diagnose until symptoms of paralysis, weakness of mind, marked headache, forgetfulness, appear to suggest what the ailment may be. Dr. F. R. Eversole, who assisted Dr. Todd, stated that in his experience at the City Insane Asylum he had not seen more decided evidence of brain disease of a chronic nature in the *post-mortems* there held upon the bodies of chronic cases. The elephant during life did exhibit symptoms that might have been supposed to proceed from slight headache, but his chief symptoms were failure in appetite for grain, with consequent emaciation. It should be remembered that the stomach contained an abundance of well masticated fodder, and there was no indication of disease of the intestinal tract, or disturbance of its functions. The matter is one of great interest to keepers of wild animals, as this elephant evidently had been liable for some time to outbreaks of violence.—*Ex.*

Raw Oysters.—Dr. William Roberts, in an interesting series of lectures on digestive ferments, published in the *Lancet*, says: The practice of cooking is not equally necessary in regard to all articles of food. There are important differences in this respect, and it is interesting to note how correctly the experience of mankind has guided them in this matter. The articles of food which we still use in the uncooked state are comparatively few, and it is not difficult in each case to indicate the reason of the exemption. Fruits, which we consume largely in the raw state, owe their dietetic value chiefly to the sugar which they contain; but sugar is not altered by cooking. Milk is consumed by us both cooked and uncooked, indifferently, and experiment justifies this indifference; for I have found on trial that the digestion of milk by pancreatic extract was not appreciably hastened by previously boiling the milk. Our practice in regard to the oyster is quite exceptional, and furnishes a striking example of the general correctness of the popular judgment on dietetic questions. The oyster is almost the only animal substance which we eat habitually, and by preference, in the raw or uncooked state, and it is interesting to know that there is a sound physiological reason at the bottom of this preference. The fawn-colored mass which constitutes the dainty part of the oyster is its liver, and this is little else than a heap of glycogen. Associated with the glycogen, but withheld from actual contact with it during life, is its appropriative digestive ferment—the hepatie diastase. The mere crushing of the dainty between the teeth brings these two bodies together, and the glycogen is at once digested, without other help, by its own diastase. The oyster in the uncooked state, or merely warmed, is, in fact, self-digestive. But the advantage of this provision is wholly lost by cooking, for the heat employed immediately destroys the associated ferment, and a cooked oyster has to be digested, like any other food, by the eater's own digestive powers.

NEW YORK.

While the pages of General Walker's census volumes are not the most interesting reading in the world there is at least one table of his formidable figures which possesses a very great and deep interest. With her imperial figures of one million two hundred thousand, New York is the queen city of the continent. We have fifty thousand more population than Chicago, Boston, and St. Louis combined. We almost outnumber the residents of the beautiful city of Penn and of New England's Puritan capital put together. If Cleveland, Pittsburgh, Buffalo, Washington, Newark, Louisville, Jersey City, Detroit and Milwaukee could all be welded together we should still outrank them. If a comparison be made between her and the States it will be found that there are twenty-one of the great Commonwealths of the Union each one of which has a smaller population than is included within our municipal limits. We are larger than Arkansas, California or Colorado, Connecticut or Delaware, Florida, Kansas, Louisiana, Maine or Maryland; Minnesota, Mississippi or Nebraska; Nevada, New Hampshire, New Jersey, Oregon, Rhode Island or South Carolina, and, to close the long list, than Vermont, or West Virginia.—*N. Y. Herald.*

Prolific—Diet from a Practical Stand Point.—The maternal cod has great domestic expectations; she always lays several million eggs at a time, so if she were to rear a full family she could almost supply the Union with fish balls for a year. But she leaves her eggs on top of the water, where other fish and seabirds lunch upon them to their stomachs' content before the tiny globes can be vivified. Even if let alone the chances are largely in favor of the eggs remaining barren and finally decaying. Other well known fish, the shad, mackerel and salmon being among them, are equally careless and less prolific. But let their eggs be protected, as they are on the hatching steamer, and be brought in contact with the fecundating principle, which in the ocean reaches them only by chance, and nine-tenths of the whole "laying" soon develop fish which, though tiny, are large enough to pick up a living and lively enough to get away from such marine admirers as may think them sweet enough to eat. The hatching capacity of the Commission's vessel is enormous; last season fifty million young shad were dropped over the side to begin the voyage of life, besides a great many salmon, cod and Spanish mackerel. This season the yield will probably be several times as great, the facilities having been improved and experience having made the operators more perfect.—*N. Y. Herald.*

Pasteur's New Discovery; Vaccination a Protection Against Chicken Cholera.—The cable gives us news of the British fights in Afghanstan, of the quarrels between the Turks and Russians, and of the doings of the titled nobility in various lands; but for the discoveries of science which really benefit mankind everywhere, we have to depend upon the slower transportation of the mails. The following article from the *Tribune Medicale*, Nov. 7th, 1880, is worth all the cable news of the past year.

M. Pasteur has finally disclosed his famous result, so long awaited, the discovery of a means of vaccinating chicken cholera. We have before us the text of the publication presented simultaneously to the Academy of Science and the Academy of Medicine. The revelation consists in the attenuation of the virus by simple contact with the atmosphere. In effect, it is the simple change of the mode of culture of the parasite, whereby the stages of its development are elongated. In this way the virulence of the virus is progressively diminished until, as the author says, "we obtain a true vaccinal virus, which does not kill, produces a benign form of the disease, and protects against a mortal malady."

The author declares further: "It is not to be believed that in these attenuations, the results occur with fixedness and mathematical regularity. In some expermients the virus continues to exhibit considerable virulence even after the lapse of five or six months, while in others of the same kind, it shows a great attenuation even after three or four months. The course of this difference, however, becomes apparent on examination. Very often a high degree of virulence ceases suddenly with the death of the microscopic parasites. The death of the parasite is an habitual and constant circumstance with the lapse of sufficient time."

It is this necessity of "*temporization*" which M. Pasteur invokes, in passing, is the true cause of his silence to the present time.

The attenuation of the virus is the capital fact. But what is the real cause of the diminution of the virulence?

The cultivation of the parasite requires as a necessity an absence of air. This parasite is therefore one of those which M. Pasteur has already characterized as *aerobies.* It cannot develop in the presence of the air. It is then the oxygen of the air which reduces the intensity of its virulence? Does the parasite undergo such attenuation in the presence of oxygen as to suffer modification in its effects?

This hypothesis was easily verified by experimentation. For it is true that in the experiments conducted by Pasteur with all his characteristic precision and delicacy, the virus kept in hermetically sealed tubes lost none of its poisoning power, while that exposed to the air gradually lost it altogether. "The problem we study thus resolves itself," said M. Pasteur. "It is the oxygen of the air which enfeebles and destroys the virus."

And further he adds:

"We have here probably more than one isolated fact. We have come into possession of a principle. We may hope that the inherent action of oxygen, a natural force present everywhere, may show the same efficiency with regard to the virus of other diseases. The widest generalization should be made at once of this method of enfeebling the virulence. It derives its virtue from the cosmic order of things, so to speak. May we not, indeed, attribute to this fact the limitation of epidemics in our times and in the past?

This modification induced in virus by the action of the atmosphere has been long known and appreciated. We have, for so long a time as we have had it, protected vaccine virus from the air in every way. Exposure to the air destroys it. We keep it from the air by wrapping it in the lead foil, or we seal it hermetically in glass tubes by the aid of the flame of a lamp.—*Ex.*

Constipation.—If we remember the power that the colon possesses of absorbing fluids (which numerous experiments place beyond a doubt), we do not require to ask an explanation as to the disappearance of the watery constituent of the stools in subjects suffering from constipation. When the fæces descend into the colon they are of a soft consistence; they are *not* hard and dry. What has become then of their watery constituents when they are converted into hard scybalous masses? Sometimes so difficult to pass are they, that an evacuation of the bowels in such circumstances may actually produce more suffering than the pains of labor. What becomes of the watery portion of the fæces, and what is the effect on the general system, especially the nervous apparatus, of the hardened matter lodging in the bowel? We have not to look far for any answer to the first part of the question when we are cognisant of the power of absorbing liquids which the large intestine possesses. The fluid most certainly finds its way into the blood, and thus of necessity produces a form of blood-poisoning. We may note the following effects produced by the absorption of such fetid matter—the red corpuscles become diseased, they are altered in color, diminished in numbers, have their carrying power lessened. Thus a sallow complexion results, dark rings appear below the eyes where the skin is thin and more transparent, the limbs and extremities are cold in consequence of oxygen being supplied in less quanity. There is a feeling of lethargy due to the blood being vitiated and the corpuscles being in this enfeebled state. Consequently the system is not nourished, and there is a falling off in flesh. Then there is a diseased blood supply circulating through the nervous system, and as a consequence nervous depression co-exists. The pulse becomes slow and easily compressed. There is a feeling of numbness in the extremities, the organs of digestion and assimilation are lowered in tone. There is a loss of memory, and a want of power of concentrating the thoughts, a heavy drowsiness supervenes, which never seems to be removed by what appears to be really sound sleep, and all the functions of the body are carried on in an unsatisfactory way. It must be relieved or disease and suffering are unavoidable.—*Lancet.*

Burns and Ulcers.—Healing by Union of Granulations.—In cases of extensvie superficial burns, it is a good plan to draw the edges together, and for this purpose to employ the button-suture. Having washed the sore carefully with boracic lotion, I operated under the spray, because, after the parts are drawn together, the wound ceases to be a superficial ulcer. I then entered the needle two inches from the sore, and brought it out at the margin, entered it again at the opposite margin, and brought it out two inches off. When the sutures had been drawn tight upon the buttons (of the largest size), the sore, originally three inches in diameter, was reduced to a line three inches long. It was then dressed with carbolised gauze. The dressings were changed on the fourth day, and, on the ninth, I removed the buttons, the sore being healed with the exception of little marks where the silver wire passing from the buttons had slightly cut the skin. The buttons should be of the largest size, at least an inch long.—[*Glasgow Journal.*

The Origin of the Stethoscope.—M. Chereau, in a French Medical journal, gives the following interesting history of this useful little instrument:

One day, as Laennec was crossing the court of the Louvre, he observed some children, who, with ears applied to the two extremities of a long beam, were transmitting reciprocally the light sound provoked by the stroke of the finger against the opposite end. In the intermediate space no sound was perceptible. The careful observer reflected, and soon, like Archimedes, he was able to exclaim, "I have found it!"

Some time afterward, in fact it was in 1816, being consulted for a young woman who presented general symptoms of heart disease, in which percussion gave small results on account of the stoutness of the subject, the age and sex of the patient forbidding his listening directly with the ear, he remembered the children of the court of the Louvre. Immediately he took a paper copy-book, of which he made a roll closely pressed together, placed one end of it upon the chest of the young woman, applied the other to his ear, and found with pleasure that in that manner he could perceive much more clearly the beats of the heart. So a play of children and regard for modesty were two facts which led to the discovery of medical auscultation.

Laennec then modified this roll of paper, giving it more firmness, limiting its length to a foot, its diameter to sixteen lines, smoothing the two extremities with a file. Then he made other experiments: he constructed a tubular cylinder of goldbeater's skin, which he filled with air by means of a spout, and of which the central opening was maintained by means of a support of pasteboard; he made an experiment with glass and metals; finally he stopped with a cylinder of light wood, pierced in its centre with a tube, expanded at the extremity in the form of a funnel. We have seen in our youth the original stethoscope of Laennec. In truth, it had a size altogether useless and well adapted to terrify patients.

Arterial Transfusion of Blood has been performed ten times by Professor S. P. Kolomnin, (Transactions of the Society of Russian Physicians; abstracted in Medical Record, Nov. 6th, 1880). He injects defibrinated blood into the peripheral end of the radial artery, and claims for the method that it is as simple and as easily performed as venous transfusion, that a greater quantity of blood, from one hundred to two hundred and twenty cubic centimetres, may be injected, that it enters the heart more gradually, and that there is no danger of its obstructing the vessels of internal organs.—*Chicago Med. Rev.*

An Improved Glue Dressing for Wounds.—Cabinetmakers and wood workers generally are familiar with the uses of glue in dressing tool cuts and other slight wounds incident to their calling. The glue pot is always handy in their shops, and a glued rag answers as well as the best adhesive plaster.

In a recent paper before the Philadelphia Academy of Surgery, Dr. Hewson recommends the addition of acetic acid to the glue, and a little atter of roses to cover the odor of the glue and the acid. This compound spread on paper or muslin makes, he says, a good substitute for adhesive plaster for surgical use. It is easily and quickly prepared simply by putting into a vessel of boiling water a bottle containing one part of glue to four, by measure, of the acid, and letting the bottle remain in this bath until the glue is fully dissolved and mixed with the acid. Common glue may be used and officinal acetic acid, to be had at any drug store. The mixture should be kept in a wide-mouthed bottle, well stoppered by a long cork, which can always be removed by heating the neck of the bottle. Care should be taken to keep the mouth of the bottle clean by wiping it well with a cloth dipped in hot water. A bottle of this cheap and easily prepared dressing would be a good thing to have at home as well as at the workshop.

"Tripolith" as a Dressing for Fractures.—At a recent meeting of the Berlin Medical Society, Professor von Langenbeck recommended tripolith (so-called on account of its hardness and power of resistance) as a new substitute for plaster of Paris in fixative dressings. Tripolith was discovered by B. von Schenke, of Heidelberg, in the course of last summer; and was exhibited and obtained a premium at the exhibitions in Brussels and Mannheim. It was originally intended for stucco and decorative purposes, for which, on account of its greater lightness after drying, and its power of withstanding damp, it is said to be better adapted than plaster of Paris. Its mode of fabrication is not known, but its chief constituents are calcium and silicum, with a minute portion of iron oxide. Tripolith forms a grey powder, which to the touch is finer and softer than plaster of Paris, although of the same weight in the rough condition. An unfortunate accident in Belfast first led to its introduction into surgical practice. The local agent of Messrs. von Schenke broke his arm, and Professor Kronlein, who treated him, applied a plaster of Paris dressing. In due course, the dressing had to be changed, and the patient then remarked that he knew of something which would prove better than the plaster of Paris, and accordingly a tripolith dressing was applied. It answered so well, that since his time it has constantly been used at the Royal Clinical Hospital, and also in private practice. Tripolith bandages are, according to the *Medical Times and Gazette*, prepared and applied exactly in the same manner as their plaster prototypes. After the limb has been wrapped in a flannel bandage, gauze bandages filled with the powder are soaked in water and applied in the usual manner. A little thin solution of tripolith is then rubbed in. The charged bandages must not remain too long in water, nor must the mixture be made too thin, nor stirred too much. The advantages of tripolith over plaster of Paris are the following: 1. Tripolith appears to absorb moisture from the atmosphere less freely than plaster, and its power of setting is not lost even after long exposure to the atmosphere. The first lot received from Heidelberg was forwarded in a common sack, in which plaster of Paris would infallibly have been ruined. 2. Tripolith bandages are lighter, and therefore pleasanter to the patient. Thus an equal volume of liquid plaster of Paris, fresh, weighed 604 grammes; of liquid tripolith, 208 grammes. When dried the plaster weighed 470 grammes; the tripolith 413 grammes. Thus tripolith is about 14 per cent. lighter than plaster of Paris. 3. Tripolith dressings harden more quickly than plaster. While a bandage made with the best plaster requires ten to fifteen minutes before it is quite set—and in wet

weather often remains soft for hours—tripolith sets completely in three to five minutes. On the other hand it gives off vapor for many hours, and even after twenty-four feels moist to the touch. 4. Once hard and dry, tripolith absorbs no more water. A piece of dried tripolith dressing undergoes no change when laid in water. It would be possible, therefore to allow a patient to bathe in his tripolith dressing, provided means be taken to prevent the water getting up inside it, by means of an India-rubber covering, while as regards plaster it is necessary to paint it with dammar varnish in order to make it waterproof. 5. Tripolith is a trifle cheaper than plaster of Paris.—*The Chemists' Journal.*

Uncertainty of Blood Stains in Evidence.—The circumstantial evidence of minute blood stains in criminal cases has been made much of in several recent trials. The value of such evidence has been seriously questioned by Dr. Charles O. Curtman, of St. Louis, who shows that, even when the suspected blood has been shown to be unmistakably human, the accused may plead that the blood stains were caused by predatory insects. In his experimental investigations Dr. Curtman allowed mosquitoes to take their fill of human blood, then, after keeping them in close confinement for periods of varying length, he killed them and examined the blood.

In all cases, up to forty-eight hours after a meal, a large proportion of human blood corpuscles were unchanged and readily recognizable. The size and color of the corpuscles of mosquito blood are very different from human. As the result of more than a hundred careful measurements, he gives the following sizes: Human blood (after imbibition by the mosquito) averages, in diluted glycerine, 1-3200 inch; in 80 per cent. alcohol, 1-4000 inch. Mosquito blood averages, in dilute glycerine, 1-14000 inch ; in 80 per cent. alcohol, 1-18000 inch. In the case of bedbugs it was found that these insects digest blood much more rapidly than mosquitoes do. After twelve hours no trace of human blood was discovered.

The Therapeutical Use of the Magnet.—Dr. Wm. A. Hammond (*New York Medical Journal*, Nov., 1880,) in an article on the above subject, gives some notes on the case of our colleague, Dr. DeRosset, as follows :

This case is that of an eminent physician of this city, who, on the morning of Sept. 1880, 30th, became suddenly aphasic and hemiplegic. There was no loss of consciousness. I saw him at 2 P. M., of the same day, in consultation with Dr. W. H. Hall. The right side of the face was paralyzed, and motion was entirely lost in the right arm and leg. Cutaneous sensibility was abolished throughout the whole of the right side, as was also the sense of touch on the right side of the tongue. Patient retained the faculty of smelling, and the power of holding and passing the urine and fæces. He could not speak a word but shook his head for yes or no. All the phenomena, as well as the previous history of the case, pointed to the existence of a clot, probably involving the left optic thalamus and the posterior third of the internal capsule. A year ago he had had a retinal hæmorrhage, and for several years had suffered from cirrhosis of the kidneys. The patient was kept quiet. I saw him every day with Dr. Hall, but no medicine was administered, except a solution of bromide of sodium in infusion of digitalis (the heart was very weak) and a hypodermic injection of morphia, to which he had for several months been accustomed at bedtime.

Yesterday, October 4th, I saw the patient as usual. There were present his wife and his father, also a physician. His condition was unchanged, except that he could say "yes" and "no," and pronounce his own name after some one else. I pinched the skin of the forearm on the paralyzed side until my nails almost met through the skin, but there was no sensibility. I had taken with me a magnet, capable of sustaining about five pounds, intending to apply it as a therapeutical measure. My purpose was to place it against the left side, under the axilla, and to keep it in apposition with the surface by means of a towel passing around the body. While the towel was being got ready I laid the magnet against the paralyzed side, the poles pointing upward, in order to show his father how I designed employing it. It remained there less than three minutes, when I again quietly pinched the skin of the forearm, preparatory to applying the magnet more permanently. To my intense surprise, and that of all in the room, the patient gave a grimace, and reaching over his body with the sound hand took hold of the other and removed it to the opposite side of his chest. Upon examination, I found that the restoration of sensibility was thorough, and has remained intact up to the present time. I left the magnet in contact with the body for several hours longer, but there was no further improvement.—*Wil. Med. Jour.*

Abscesses.—Dr. Stephen Smith's new treatment of abscesses has been very successful. When the abscess points it is opened and the contents evacuated. The cavity is then injected with carbolized water, and over-distended for two or three minutes. The water is then pressed out, and over the whole area undermined by the cavity, small dry compressed sponges are laid and bound down with a bandage. Carbolized water is then applied to the bandage and injected between its layers until the sponges are thoroughly wet, after which a dry bandage is applied over all. The sponges, by their expansion, make firm and even compression upon the walls of the abscess, and hold them in perfect apposition, thus favoring a union. The dressing is left on for five or six days, unless there is a constitutional disturbance or pain in the seat of the former abscess. It is found, in most cases, when the banbage is removed, that the abscess has completely closed by an approximation of its walls, and the external wound heals readily under a simple dressing of carbolized oil. A case was recently seen where this admirable result was secured in a child, although the abscess was a large one, originating in caries of the head of the femur, and opening on the outside of the thigh. After over-distension the sponge dressing was applied, and on its removal after five days, during which time there had been no constitutional disturbance, the cavity of the abscess had entirely closed, no pus had been discharged, no fluctuation could be felt in any position, and no evidence of a reaccumulation has since appeared. Dr. Smith has treated mammary and submammary abscesses in the same way with good results, and in a number of the wards this method is employed in the treatment of small abscesses which may result from irritant hypodermic injections.—*Notes of Bellevue Hospital Treatment in Chicago Medical Review.*

The Temperature of the Breath.—A good deal of curiosity is being expressed in regard to the apparent high temperature of the breath, under certain conditions. If we take an ordinary clinical thermometer, wrap it up pretty tightly in several folds of a silk handkerchief, apply it closely to the lips and breathe gently through the silk just over the bulb of the thermometer for about five minutes, always making the inspirations through the nose, we shall find that the thermometer will show a temperature ranging from 101° to 108°, or even 109.5°. Dr. E. S. Clark first called attention to this phenomenon in the *Medical Herald.*

Virile Impotence Produced by Salicylate of Soda.—A little known phenomenon of the action of salicylate of soda is temporary virile impotence. Dr. Dubrisay observed, in three gouty patients young enough to be good tests of the question, an absolute but temporary virile impotence, which seemed to depend upon three or four grammes (grs. xlv—ʒ i) of salicylate of soda administered for 20 days.—[*Canadian Jour. Med. Science.*

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MEDICAL NEWS.

"Nulla dies sine linea."

Dr. J. Marion Sims.—The Medical Public will be pained to learn that this distinguished physician has been desparately ill with pleuro-pneumonia. He is now convalescent or at least out of danger, though entire rest and perhaps change of climate will be found absolutely necessary for his perfect restoration.

Dr. Brown-Sequard recently narrated the following anecdote which has been reported by Sir Jas. Paget: "A prominent English personage consulted a charlatan for an ear disease; the charlatan injected into the auditory canal some drops of nitrate of silver which had the effect of causing the patient to turn upon himself during several days but did not prevent any one from returning to consult the charlatan." (Who sees Sir James's wit?)

Asylums.—Of course every physician is interested in regard to the building and management of these institutions. While such questions will be discussed briefly hereafter, it is proper to direct the attention of every reader to the wholesale loss of life which has recently occured at Beaufort and St. Peter. The sole cause of these terrible results is due to the style of architecture adopted. Instead of the cottage or pavilion system so simple, safe, beneficial and gratifying, the asylums so disastrously burned were constructed in the old style of a centre building in several stories with wings on either side; the style so generally adopted and so objectionable and often disastrous in its records. Each physycian should raise his voice and use his whole influence in having this great evil corrected. But more hereafter.

A Remedy for Diphtheria.—At a meeting of the Brooklyn Board of Aldermen a communication on diphtheria and its cure was received from a lady in Williamsport, Pa. She said that she was the mother of six children, all of whom had been afflicted with the dreaded disease and were cured by the following remedy:—"Take a slice of fat bacon—side meat—the older the better; sew it on a soft piece of flannel; then saturate it with coal (petroleum) oil. Place it on the neck, having the meat reach from ear to ear. After pounding several raw onions into a poultice, place enough of the same into the patient's stockings to cover the soles of the feet, and have the patient put the stockings on. The poultice must be warm in order not to chill the patient. The throat should then be gargled with some tomato catsup, strong with red pepper, salt and vinegar, or pepper, salt and vinegar shaken well together will do. If the patient it too young to gargle, wet the throat with a few drops. If vomiting occurs lime water purchased at a drug store with directions should be given. Be sure to cause an irritation on the neck."

The communication was referred to the Board of Health.

NOTE.—This prescription is almost as good as that of another old woman for chills, viz: to tie a cotton string around *a hickory* limb.

THE Tri-States Medical Society; at its late meeting, elected as President, Dr. A. M. Owen, of Evansville, Ind.; as Vice Presidents, Dr. David Prince, of Jacksonville, Ill., and Dr. S. H. Charleton, of Seymour, Ind.; Secretary, Dr. G. W. Burton, of Mitchell, Ind. The late meeting was held at Louisville, Ky. The Louisville *Medical News* says that it sees no call for the existence of a Tri-State Society, that it cannot effect anything which separate State organizations cannot effect, while it serves to detract from the usefulness of these. The Cincinnati *Clinic* says the profession of Louisville did not manifest any enthusiasm over the meeting of this Society, in fact it was noticeable that many of the prominent members of the profession did not attend the meetings.

THE Guy's Hospital (London) quarrel has at last ended. The medical staff has abjectly yielded to the demands of the lay governors. By the constitution of the hospital, the medical staff is entirely at the mercy of the lay governors, as much so as the hall porter or any of the menials of the hospital. They are liable at any time to dismissal, to suppression and to the control of the most absolute kind; they have no voice in the management of their hospital; they have no place in the councils of the governors. They are absolute servants of the governors, with a few of the privileges accorded to the higher class of servants.—*Ex.*

THE Chair of Professor of Surgery in the Medical College of Virginia, has been made vacant by the resignation of Dr. Hunter McGuire, whose connection with the Institution has been so influential. Several prominent gentlemen are candidates for the position. The Board of Visitors were to meet December 19th, 1880, for the election of a Professor of Surgery to fill the vacancy caused by the resignation of Dr. McGuire.

A CATHOLIC priest has just been indicted in New York State for resisting sanitary regulations in respect to variola.

DR. ELSBERG of this city lost a patient under very singular circumstances. The patient had come to him to be examined for a throat trouble. No lesion was visible by the laryngoscope, and the patient was examined by the œsophageal sound with beneficial results as regards the throat trouble. Soon after cutaneous emphysema made its appearance at the angle of the jaw, rapidly involving the whole body, the patient dying subsequently. On the autopsy a rupture of the apex of the right lung communicating with the pleura but not with either trachea larynx or œsophagus was found.

L'Union Medicale is responsible for the following: "One of the Popes who was very obnoxious to the Roman populace, fell ill from generous living, and came under the care of a physician who placed him upon meagre diet, after which he soon died, whereupon the populace carried the portrait of the physician in triumphal procession around the city with the following inscription upon it, 'Behold the sheep who took away the chief of sinners from the world.'"

DR. E. GEIR, of Dublin, Ireland, has had the honor of being the first medical man to receive the Albert Medal for bravery in the exercise of his profession.

THE Pennsylvania Railroad Company has resolved to appoint physicians to look after people injured on their road.

A BOY nine years of age having killed one aged eight is to be tried for the murder, which occurred in Maine.

DIPHTHERIA is raging so violently in Montague, Mich., as to require the schools to be closed.

THIRTY-ONE thousand eight hundred and sixty-six deaths occurred in New York city last year.

THE fifteenth child of a woman aged thirty-one was recently reported at the New York City Board of Health.

A PATIENT died in New York city recently for want of proper nourishment whose aunt had given $10,000 to a dispensary.

DIPHTHERIA, which has been extremely prevalent in Brooklyn, N. Y., is now diminishing.

M. LEVEN recently reported to the French Society de Biologié several cases of recovery from intractable vomiting after treatment by electricity applied directly to the stomach.

THE PROSTITUTION OF TEXT PAGES of Journals by incorporating advertisements with them has almost disappeared. There are very few Journals of any position or character who are now guilty of so doing. The stamp of reprobation has been set upon this act, and the objectionable proceeding must soon cease.

THE Midwifes of Cincinnati and New York deliver about seventy per cent. of the labor cases; both cities have comparatively many ex-washer-women midwifes unable to even write, which probably accounts for the difference between the birth and death rate.

THE New York law making communications to physicians privileged has been imitated in bills before the Maryland and Pennsylvania legislatures, but failed to pass the legislature of the former State.

THERE are six thousand homœopaths in the United States.

DR. BERGERON and PIDOUX of Paris have been made Commanders of the Legion of Honor.

DR. LISTER has received the medal of the Royal Society.

DR. MATTHEWS DUNCAN has been made president of the Obstetrical Society of London.

THE Deadwood Medical Society has made its debut with Dr. J. J. Houghton for its President and Dr. J. C. O'Neall for Secretary.

DR. WM. D. GRANGER of Buffalo, N. Y., has been appointed first assistant physician of the State Insane Asylum at that place.

THE St. Louis *Clinical Record* quotes a Missouri journal as referring to *artificial blood.*

PATENT Medicine taxes netted $750-000 for the English treasury last year.

THE Wisconsin Insane Asylum is to have its business and medical departments separated.

DR. G. W. LAWRENCE, of the Hot Springs, Arkansas, says the water there kills consumptives.

DR. BERGH has turned his attention from cats to vivisection, and is vigorously denouncing Cooper, Bell, Brodie, Jno. Hunter, Magendie and other physiologists.

THE International Sanitary Conference at Washington, January 3rd, was attended by representatives from Austria, Brazil, Belgium, Canada, Chili, China, England, France, Germany, Italy, Japan, Mexico, Netherlands, Norway, Portugal, Russia, Spain, Sweden and Turkey.

The Electric Lighting.—The Commissioner of Public Works, New York city, has granted Mr. Edison a permit to introduce his system of electric lighting in the lower part of this city.

Registration.—Two thousand two hundred and fifty physicians have registered in New York city since the passage of the New York medical practice act.

The Prall System of Heating.—During their recent convention in New York the members of the American Society of Civil Engineers were entertained by the Prall Union Heating Company. The dinner was cooked throughout by superheated water, and the cooking was accepted as unquestionably satisfactory.

That bread can be baked and meat roasted by hot water may seem quite incredible to those who think of boiling water only as commonly seen in open vessels. Under atmospheric pressure water can be heated no higher than 212 degrees, far below a roasting temperature. But when confined there is no limit to the temperature it may receive save in the weakness of the vessel.

All Failures.—All of the new inventions for increasing the power of audition are failures; the audiphones, dentiphones, etc.: the old ear trumpet is superior to them all.

A Blasphemous Beast.—The following notice appeared in a recent Sunday edition of the New York *Herald*: "Was Christ a Scientific Physician or Quack, and Could He Register?" is the question that Dr. Landis will answer this morning in his Scientific Church."

Trichinæ.—The Secretary of the Treasury recently transmitted to the Senate a report on the alleged occurrence of trichinæ in American hams and other meat in Germany and elsewhere. The report was prepared under the direction of the Surgeon-General of the Marine Hospital Service, and was called out by letters received from United States consuls in foreign parts, one of which, from the Consular Agent at Mayence, states that on investigating the reports of the finding of trichinæ in American pork it was found that the infected meat was not American but German. The Senate report says that the number of diseased swine is overestimated, probably through the influence of those most interested—the German pork dealers and producers.

An Orthodox Scientist.—Great will be the disgust of most scientists as they read the newest book from the pen of the well known ichthyologist, Frank Buckland, who died recently. Mr. Buckland was an esteemed authority in his special department of science, but it appears that he has never considered it necessary to adopt any of the theories which many of his contemporaries have made haste to treat as facts. He actually qualifies the sacred word "evolution" by the prefix "so called;" he does not even spell it with a large E, and he is equally contemptuous of "development." He believed that animal life was perfect of its kind from the beginning, and evidently declined to trace his genealogy back through monkeys, lizards, snails and polyps to protoplasm. How far he was right remains to be demonstrated, but of one thing his admirers may be certain—he cannot have erred further on the side of caution than those he opposes have done in the direction of mere speculation.

Poisonous Drinking Water.—With a view of making a chemical examination of drinking water, the National Board of Health has issued a request to correspondents of the Board, to medical men throughout the country, and to others interested in sanitary matters, that anywell marked case of disease which may seem, on medical grounds fairly attributable to organic impurities in drinking water be promptly reported to Dr. J. W. Mallet, University of Virginia; Post Office, Albemarie county, Virginia, with a few lines stating clearly the medical nature of the case and the character of the evidence on which the water in question is suspected of having actually caused disease in persons who have used it. It is desired also that samples of such waters shall be forwarded for examination, the cost of transportation of which will be borne by the Board.

Prolongation of Life.—Some years ago the French Ministry addressed a circular to all the prefects, desiring them to institute inquiries as to the conditions which appeared peculiarly to favor longevity in their several districts, and the replies are said to have almost unanimously indicated as the leading elements or influences, great sobriety, regular labor and usually in the open air, daily exercise short of fatigue, early hours, a comparatively well-to-do life, calmness of mind in meeting troubles, moderate intellectual powers, and a family life. The beneficial influence of marriage on the duration of life is universally admitted, and remarriage does not seem to be unfavorable. The prefects also indicate heredity as a frequent cause, and the influence of climate is likewise admitted; this latter, however, is separable with difficulty from other causes which may be operating simultaneously ; but if all things were otherwise equal, if would seem that southern are less favorable to longevity than northern climates.

New Plan for the Drainage of Chicago.—A committee appointed by the Citizens' Association, of Chicago, to devise a system of improved drainage adapted to the present and future needs of the city have reported in favor of a vast sewer to drain the entire district traversed by the Chicago River. The estimated cost of thework is $6,850,000, but it is thought that to complete it in every respect the sum of $12,000,000 will probably be necessary.

Indian Ethnology.—Major J. W. Powell, Chief of the Bureau of Ethnology, Washington, lately gave to the *Republican*, of Omaha, Neb., information to the effect that there are now eight official parties in the field engaged in making a study of the North American Indians—their condition, their habit of life, their languages, their history, etc., as well as taking a census of them. These parties, who are roughing it with tents, mule teams, etc., are scattered throughout California, Nevada, Utah, New Mexico, and Arizona.

Professor Gamgee's Ice Machine.—A press dispatch from Washington, dated December 22d, gives a very amusing report of an exhibition of an ice machine at the Navy Yard the day before. The report states that "the great novelty of the apparatus consists in the utilizing of heat which all others waste, and the liquefaction of ammonia by expansion. Almost immediately after the machine was started a temperature of nearly zero was obtained. Chief Engineer B. F. Isherwood, in an interview with Professor Gamgee, recognized the correctness of the principle, which had now been demonstrated to be sound by actual test. The heat of southern climes, the Professor maintains, will henceforth prove no obstacle to cheap ice making, since where there is most heat, by his new system, there is most available energy wherewith to drive the machine. The consumption of coal is thus reduced to a minimum. This fact was recognized by the Board of Naval Engineers, who reported favorably on Prof. Gamgee's plans for the refrigerating ship !!"

Death of Levin Smith Joynes, M. D., LL. D.—The many friends of this distinguished and honored physician will be pained to learn that, after years of suffering and progressive emaciation, from some obscure gastric disturbance, he, on the 18th of the present month, at his home in Richmond, Va., quietly passed away, leaving a wife, a son, and a very large circle of devoted friends to mourn his loss. He was graduated as bachelor of arts from Washington College, Pennsylvania, and pursued his medical studies at the University of Virginia and the University of Pennsylvania, graduating as doctor of medicine at the former, and subsequently spent two years in continuance of his medical studies in Paris, Dublin, &c. He became professor of physiology and legal medicine in the Franklin Medical College, of Philadelphia, in 1846, returning to Virginia in 1849 and continued in practice until 1855, when he was elected professor of institutes of medicine and medical jurisprudence in the Medical College of Richmond, with which institution he was connected in various high positions until his death. He had been a member of the American Medical Association since 1847 and of its judicial council since 1873. He was also a delegate from the Medical Society of Virginia to the International Medical Congress in 1876, and contributed largely to professional literature. Dr. Joynes was a son of Thomas R. Joynes, formerly a prominent lawyer of Virginia, and was a brother of the late Judge Joynes, of the Court of Appeals of Virginia, and of Professor Edward S. Joynes, now of the Vanderbilt University.

Dr. Joynes was sixty-two years of age when he died, and has left a record which the best seldom surpass and few indeed ever equal.

The writer of this brief notice served as a colleague with Dr. Joynes in the Medical College of Virginia, and there and for many years after knew him well and intimately. It was, indeed, only in August last, that he received, in his quiet retreat by the seashore, a long and affectionate letter from the deceased, in which a description of his case was so accurately given, that even then the shadow of the coming event seemed to fall upon that let- and to herald the early death of the distinguished writer.

And so brother, friend, thou too art gone to thy rest. Happy be thy bed, and light be the turf above thee; and though thy material nature shall soon be resolved into nothingness, know that the higher man shall, in the memory of thy friends, live as green as the turf and the flowers, which affection shall keep bright upon thy grave.

EDITORIAL.

" Nullius addictus jurare in verba magistri."—HOR.

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THE MEDICAL YEAR 1880.—The year just expired has been singularly devoid of any marked discoveries, or any material improvements in any of the departments of Medical Science. The professional journey during this entire interval has been quiet, progressive, and uninterrupted; steadfast, earnest, and laborious; but there are no monuments which have been, or are to be erected along the roadside, to mark the accomplishment of any great triumphs, or to indicate the establishment of any brilliant discoveries. And yet to those who have interestingly and carefully watched the captains and the followers in the great Professional army, there has appeared, most welcomely, every evidence of patient, honest, fruitful toil; and though unblessed by any great or historical victories, the Medical army completely respected in all of its appointments stands, at the new year, efficiently prepared to move onward; and, if the occasion offers, to reap new triumphs and to conquer new victories.

In gynæcology and obstetrics startling deaths after apparently trifling operations upon the uterus and its appendages, have rendered the specialists more careful and more conservative. There are still those (and many of them) in this department who had they never entered the profession would have satisfied or exhausted their inventive faculties in the elaboration of curious traps and wonderful cages, and who being in the department of gynæcology give vent to their inventive genius by descriptions of marvellous pessaries and startling specula; but during the year 1880 they seem to have slumbered, and to have left undisturbed the study and reflections of their more reliable and less troublesome brethren. Their quiet, if long, can not be continuous, and very soon the new year must invite these brilliant spirits to the suggestion of new machines for the torture of the sick, and the confusion of those whose mission is to heal them. The Porro operation does not seem to have sustained the character it temporarily secured during the year 1879. Two-thirds of the cases in 1880 have died, fifteen out of twenty-two; while in 1879, out of seventeen cases, ten recovered. The mortality has therefore been greater in this operation in this country than in the Cæsarean operation; only twenty-six in sixty-two after the Porro operation have recovered; while in the Cæsarean operation there have been fifty recoveries in one hundred and twenty operations. Emmet's views and practice have gained ground, and his followers have certainly largely increased. Battey's operation is yet sub judice. There have so far been one hundred and thirty well authenticated cases, by thirty-six operators, all men of distinction—eighty-six recovered and twenty-three died after laparotomy; seventeen recovered and four died after elytrotomy; a mortality of nineteen per cent. for the vaginal section, and fraction over twenty per cent. for the abdominal; a joint mortality of over twenty per cent. Such mortality makes this operation justifiable only after all other means of relief have failed. The future must determine more clearly the nature of the cases in which it should certainly be performed. There is nothing of especial interest to note further in this department. The best men are patiently at work, and their future statistics will indicate the truth.

In general surgery the chief attention of the most prominent operators has been given to the question of Listerism. Bryant, Spencer Wells, Holmes, Lister, Sir James Paget, MacCormac and many others abroad and at home have debated this question in lectures and with the pen, but so far the results are not entirely satisfactory. Enough has been demonstrated, however, to show that dogmatic expressions on the part of obscure and relatively inexperienced men are not only unwise but calculated to render them contemptible. When the problems unsolved are so difficult and intricate as to justify hesitation on the part of the wise, the distinguished and the great, it is not only ludicrous but ridiculous to see those too small to fill even a small chair declare ex-cathedra their petty opinions and valueless predictions. Something positive and reliable, however, has been reached. It is true that Runke and Klebs have proved that organisms develop about and underneath antiseptic dressings, but Cheyne has proved that there are two kinds of organisms principally, the bacteria and micrococci, and that they are not interchangeable. He has proved that while bacteria are always associated with putrefactive changes, the presence of micrococci is not indicative of putrefaction or decomposition. And that while micrococci, which are not indicative of putrefaction may be found under antiseptic dressings, the bacteria, whose presence indicates always putrefactive changes are never found where antiseptics are freely used. The presence of micrococci after Listerian methods of dressing, therefore, does not prove any failure of antiseptics, for these organisms, do not spring from putrefactive forces ; but the bacteria organisms always to be seen where putrefaction occurs, are never seen when antiseptic dressings are efficiently prepared and adjusted. This is a positive advance. There is nothing else especially to be noticed in regard to general surgery in the past year.

Materia Medica has made no definite advances. Duboisia is slowly gaining its way as a mydriatic. Jaborandi, or its alkaloid, pilocarpine, is definitely accepted as a most valuable remedy in the inflammations of the serous membranes. Piscidia erythrina, the Jamaica Dogwood, has proved to be very efficient as an anæsthetic and hypnotic. The Bromide of Ethyl is generally now regarded as a dangerous agent for the production of anæsthesia. The many deaths occurring during the administration of sulphuric ether show that its much vaunted superiority over chloroform is not justifiable. The salicylate salts in gout and rheumatism have proved themselves to be efficient and reliable. Dialyzed iron has fallen almost into desuetude and does not appear to be the equal of many of the ferruginous preparations. The malt extracts are slowly but surely superseding the various preparations of cod liver oil. New remedies are being rapidly introduced, and many of them will doubtless win their way to general acceptance. The present year will determine the fate of many.

In the Practice of Medicine there is not very much to note. Nihilism in therapeutics is slowly but justly being condemned, and the posivitism which preceded it, is again becoming popular and more generally manifested. Cholecystotomy is adopted as a reliable and safe resource in hepatic and cystic dangers. The use of the aspirator in hepatic abscess is constantly becoming more satisfactory and efficient. The treatment of pulmonary cavities by injections is attracting much attention and giving fair results. The pathology and treatment of tuberculosis is not more satisfactory or reliable. There is the same old confusion and antagonism, contradiction and obscurity. Dietetic and climatic management is most reliable and gives the best results. The appropriate climate for the various stages is being better understood. Diphtheria is becoming more frequent, and the mortality (40 per cent.) as great and as depressing as ever, etc.

In cerebral microscopic anatomy, and in the pathology and management of "nervous and mental diseases" there has been positive progress, but the relative details are more properly given in a Journal devoted to these specialties.

Synthetic and analytical chemistry have also been consecutively improved, but the details are not of sufficient interest to the general Medical reader to justify a detailed statement of the facts.

The specialties are as numerous as ever, and the tendency to multiply them is increasing. The ophthalmic, otic, orthopædic, laryngological (sic), neurologic, psychiatric, pædiatric, gynæcologic, thoracic, syphilitic, rectal, venereal, spinal, odontologic (sic), battalions are all, like John Brown's spirit, " marching on," but the story of their victories or their annihilation can not be given yet. Their comedies and tragedies belong surely to the future. So far no one has devoted himself to the umbilicus, but doubtless the workers for this field of promise are even now beyond the stage of embryology. Their deeds are to be a part of the chronicles of 1881.

MEDICAL SOCIETIES are languishing, and almost *in ariculo moris.* This condition is due to two causes : the petty strife for office, and the reading of interminable papers compiled from text books. Reform these great evils; elect officers (after open nomination) by ballot ; abolish the nuisance of paper-reading, and debate, impromptu, subjects suggested. When this reformation is made, Society meetings will be again popular and well attended.

FORENSIC IMPORTANCE OF BLOOD STAINS.—Attention is called to the excellent and instructive letter, on this subject, by Prof. J. G. Richardson, of Philadelphia. It will be found in the the Correspondence Department. Prof. Richardson has written with great force in this connection, not only in the letter mentioned, but in many other papers now before the Profession. It will be observed that in his views he differs very materially from those of Dr. Joseph J. Woodward, Surgeon U. S. A., and so deservedly prominent for his labors in this and other professional fields. Drs. Richardson and Woodward may both be regarded as authorities on this subject, and it is to be hoped that from the discrepancies manifested, the outcome of future researches may furnish demonstrable truth.

LIPPINCOTT'S MAGAZINE is one of the most recent additions to the exchange list and it is one of the best. The price of the periodical has been reduced to $3.00 per annum, while there has been no reduction in the size of the book or in the value of the material presented. Doctors all wish to have one or more literary magazines for the improvement and pleasure of the family, and this one can be highly recommended to them. Address J. B. Lippincott & Co., Philadelphia, Pa.

THE TRUTH.—Dr. Theophilus Parvin, of Indianapolis. Ind., thus writes of what is needed in Medical Journals : " It should tell the truth about books, no matter who the authors—where or by whom published; and be wise enough, free enough, strong enough to do justice to every man's work, no matter whether he lives in a great city, or in an obscure hamlet ; whether his home is a palace or a log-cabin."

PROGRESS.—The profession has, in the past, been called upon to believe that malarial pneumonia and bronchitis, and diarrhœa, etc., etc., etc., were to be accepted as pathological entities, and treated as such. Now it is asked to add malarial puerperal fever to the mythical list, and there are even now wranglers in the medical camp, striving for the *éclat* of having first suggested this hybrid for the table of nosology. It will be next claimed that there is a malarial gonorrhœa or syphilis.

AMUSING ITEMS.—The most amusing items to be found in the exchanges are those relating to themselves. One can not dream, until he sees them, how many journals are "the best;" how many have "the largest circulation;" how many are "the only exponent of American medicine;" how many "occupy a larger place in medical literature than any other publication in this country;" how many weeklies and monthlies are "admitted to be the best," and how many "the leading journal of the times," etc., etc., *ad nauseam.* One would suppose that the writers of such stuff would be ashamed of it, but apparently they are not; the number is steadily increasing. When the clown in motley springs into the saw-dust ring and exclaims, "Ladies and gentlemen, I will now introduce to you the champion vaulter of the world," all suppose that Mr. Merryman is the master of hyperbole and balderdash; but this is an error that no one who reads the prospectuses or declarations of some medical journals could ever make. The clown's boast is flat and tame in comparison.

A demonstrable fact is a fair statement which any one can legitimately make; but it will not do for any one (in the language of Sheridan), to draw "upon his imagination for his facts," or, like an American Indian, to be an expert in "drawing the long bow."

WALSH'S RETROSPECT.—This quarterly, edited and published by Dr. Ralph Walsh, Washington, D. C., makes its appearance this year very much improved in matter, paper and printing. It is a compendium of American medicine and surgery, and is worthy of support.

NEW YORK HOSPITAL LIBRARY.—This library has been greatly augmented during the past year by that peculiarly able and conscientious librarian, Dr. J. L. Vandervoort, and it is now probably the largest medical library in the city. As duplicate works are not enumerated in its catalogue nor counted in its enumeration of books, it cannot be compared with the other medical libraries which indulge in this absurd method of increasing their apparent value. It is open to the entire profession, and its value is much enhanced by the courteous and careful attention paid to the wants of readers by Dr. Vandervoort.

DELAY.—The changes necessary in converting this Journal into a double column work, and the increase *of over fifty per cent. in the amount of reading matter* have delayed this issue.

DOUBLE COLUMNS.—The use of double columns on the page will be very acceptable to the reader. If the experiment be made, it will be found that while reading the lines on an ordinary octavo page (each line extending across the page), the eye, from constant lateral motion, becomes fatigued; but with the use of short lines, the eye remains at rest, and is thus entirely protected.

THE ENCYCLOPÆDIA PREMIUM.—Letters are being daily received from Physicians who declare that they must be deceived in their reading of the offer made in the last number of the Journal; they seem to believe that they can not construe the language correctly: it is not possible for them to realize the fact that on remitting $10.50, they will receive this Journal for one year, and with it fifteen volumes of Chambers' Encyclopædia; each volume well bound in cloth and containing nearly 900 pages. Yet the offer is exactly what it purports to be; on receipt of the amount mentioned this Journal for one year, with the best Encyclopædia in the English language, will certainly be sent. The explanation is very simple: the Publishers are willing to pay thus handsomely for the advertisement of their work in this Journal. That is to say for each copy of the Encyclopædia sold to the Journal, they receive so much in money, and so much by advertisement. The explanation is thus easily understood. As the result, however, the Profession has the opportunity of obtaining Chambers' Encyclopædia at a price wholly unprecedented.

GAILLARD'S MEDICAL JOURNAL.

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ORIGINAL ARTICLES.

"Qui Docet Discit."

A Study of Transverse Fracture of the Patella. By H. AUGUSTUS WILSON, M. D., Lecturer on Fracture Dressings and Microscopical Anatomy in the Philadelphia School of Anatomy. Ophthalmic and Aural Surgeon to St. Mary's Hospital, Philadelphia.

Transverse fracture of the patella would seem to be of comparatively modern recognition for Hippocrates, Celsus and Galen are absolutely silent upon the subject, Sorannus being the first to give a description of it. Whether the occurrence of fracture of the patella at the present day is owing to advance in civilization or deterioration of the human economy, or both, will not be discussed in this paper. Even at the present time, however, fractures of the patella from whatever causes are not very common, for they comprised only 45 of the 2,328 cases of fractures treated in the Hotel Dieu, Paris; at most one in fifty, or an average of 4 yearly.

Anatomy. The patella is a sesamoid bone situated in the anterior part of the femoro-tibial articulation. It is enveloped in the substance of the tendon common to the extensor muscles of the thigh. It is cellular within and covered by very thin but firm plates, so that in proportion to its bulk there is scarcely a stronger bone in the body. (Anat. Phys. and Diseases of Bones and Joints, S. D. Gross, M.D., p. 137.)

The anterior surface is convex and is perforated by small apertures for the passage of the nutrient vessels and marked by rough vertical striæ, which give the fibres of the tendon of the quadriceps a remarkably firm hold.

The posterior surface is divided by a ridge into two facets united angularly, each of which articulates by a trochlear surface with one of the condyles of the femur. The outer one for articulation with the outer condyle being broader and deeper serves to indicate the leg to which the bone belongs.

The patella is held firmly in place by the quadriceps tendon from above and the ligamentum patellæ from below, and in the act of flexion and extension the patella glides over the condyles of the femur, giving an example of a lever of the first order. The extensor muscles are the power, the leg the weight, and the patella resting on the condyles of the femur the fulcrum placed between the power and the weight.

The predisposing causes of this lesion may be age, sex, scurvy, gout, cancer, syphilis, rachitis, occupation, attempts at muscular feats. The study of age and sex and their influence in the causation of any disease or deformity is always of interest, and I think it particularly so in fractures of the patella.

In the following table I have collated from the annual reports all the cases of transverse fractures of the patella from whatever cause, that were treated in St. Bartholomew's Hospital, London, during a period of eleven years, from 1866 to 1877, inclusive, omitting 1869, for which year I was unable to find a report:

Between the ages of	15 and 25	there were	20,	or one-fourth	of the	total	number.
" " " "	25 and 35	" "	70,	" one-fourth	"	"	"
" " " "	35 and 45	" "	98,	" one-third	"	"	"
" " " "	45 and 55	" "	63,	" one-fourth	"	"	"
" " " "	55 and 65	" "	22,	" one-fourth	"	"	"
" " " "	65 and 75	" "	9,	" one-thirtieth	"	"	"
" " " "	75 and 85	" "	2,	" one-140th	"	"	"

Thus it will be seen that 98 cases, or about one-third of entire number, occurred in persons between the ages of 35 and 45.

The study of sex is likewise of considerable importance and none the less interesting. From the same source I found that

Between	15 and 25	there were	16	males and	4	females, the proportion being	as 4 to 1.
"	25 and 35	" "	54	" "	16	" " " "	3½ to 1.
"	35 and 45	" "	62	" "	36	" " " "	1¾ to 1.
"	45 and 55	" "	36	" "	27	" " " "	1⅓ to 1.
"	55 and 65	" "	13	" "	9	" " " "	1½ to 1.
"	65 and 75	" "	7	" "	2	" " " "	3½ to 1.
"	75 and 85	" "			2	" " " "	
	Total,		188	" "	96	" " " "	2 to 1.

Transverse fracture when due alone to muscular action takes place always when the leg is *flexed* upon the thigh and *sudden* muscular contraction takes place.

To illustrate the first, suppose that I should wish to break a pen holder, I certainly would not direct my force in the line of the fibres of the wood, but would place my thumb near the middle (a fulcrum) and apply the force required to break the stick at the two ends, using the force against the fulcrum, thus illustrating power and resistance.

So it is with the patella, which would require an immense force to break if the leg was extended and the power was exerted in a line with fulcrum and resistance, but when the patella is held against the condyles of the femur and the leg is flexed a tremendous force, the character of which is a cross breaking strain is being exerted upon the patella.

The second element required is sudden muscular contraction. A delicate silk cord may be made to sustain a certain weight if the power is exerted gradually, but if the same cord and the weight are submitted to elevation suddenly applied the cord will break.

A few cases due entirely to muscular action may be studied with benefit.

Cases 1, 2.—Bichat (Packard's Malgaigne, p. 602), and Sir A. Cooper (Cooper's *Surg. Essays*, Part II, p. 85), each saw a case where the fracture took place in aiming a kick, the motion of the foot being suddenly impeded, fracture took place.

Case 3.—Hevin saw the case of a dancer who received a fracture in making a great effort in leaping. (Packard's Malgaigne, p. 602.)

Case 4.—In the operating theatre of the Hotel Dieu both patellae of a patient were broken by the violent spasms of the muscles which *followed* an operation for stone. (Cooper's *Surg. Dict.*, p. 752.

Case 5.–Bichat (Packard's Malgaigne, p. 602) mentions the case of a man who was cut for stone and who in a *subse-*

quent convulsion broke both patellæ at the same time.

Case 6.–Desault (Gross System Surg., 5th Edit., Vol. I, p. 1,001) met a case in which a man broke both patellæ simultaneously by a violent effort of the muscles to disengage the limbs from the constrained position in which they were placed *during* the operation of lithotomy. Before the use of anæsthetics, the patients who were to undergo this operation were placed upon their backs and the wrists and ankles of corresponding sides were securely fastened together.

Case 7.—Boyer (*London Med. Repos.*, 1823, Vol. XIX, p. 174) speaks of a coachman who, being in danger of falling from his box, made an effort to save himself and heard the crack produced by the fracture.

Case 8.—Dr. Kirkbride (*Am. Journal Med. Sci.*, Aug., 1835, Vol. XVI., p. 330) records an instance in a man who attempted to jump into a cart and broke his patella.

Case 9.—Fielding (*London Med. Repos.*, Vol. XIX., 1823, p. 174) met a case in a woman caused by attempting to lift a heavy basket.

Case 10.–A sailor (Hamilton, Fractures and Disloc., Ed ? p. 434) caught the heel of his boot in a knot hole, in the floor, which threw him backward, and in the effort to save himself from falling the patella was fractured.

Case 11.—Jno. C——k was admitted to Dr. R. J. Levis' ward at the Pennsylvania Hospital January 7th, 1878, and said that he had slipped upon the ice, and in the effort to save himself from falling felt the patella snap. There had been a fracture of a similar nature of the opposite patella seven years before. The fragments on the side of the old fracture were separated four inches. The patient stated that there had been close apposition when he was discharged, but that the separation had gradually taken place.

Case 12.—About the same time Mary Mc—— was admitted into the same Hospital and under the care of Dr. Levis. The fracture was also caused by a slip upon the ice and an attempt to prevent falling.

Case 13.—Sands (*Med. Rec.*, Feb. 2, 1878, p. 87) reports a case where the fracture was caused by the effort to prevent falling on being roughly assaulted.

Case 14.—A gentleman (Sir A. Cooper, *Surg. Essays*, vol. I, p. 350) in jumping a ditch fractured his patella in his effort to prevent falling upon reaching the opposite side.

Case 15.—Sir Wm. Blizard (*Lancet*, Aug. 17, 1833, p. 673) reports the case of Wm. A——, who, while walking on the curbstone slipped off, and in the effort to prevent falling, fractured his patella.

Case 16.—A man (*Am. Journal Med. Sci.*, July, 1848, p. 220) was tripped by the rope of a canal boat, and before reaching the ground felt the snap accompanying the fracture.

Case 17.—M. Sallemont (*Cyclopæd. Anat. and Phys.*, Todd, vol. iii., p. 70; *Boyer's Surg.*, vol. iii., p. 358) reports the case of Louis M——, who was thrown by a comrade with whom he was struggling, and in the effort to prevent falling broke his patella.

Case 18.—Mr. Liston (*Lancet*, Oct. 14, 1873, p. 81) reports the case of Eliz—— S——, who fractured her right patella in leaping from an embankment.

Case 20.—Dr. Kirkbride (*Am. Jnl. Med. Sci.*, Aug., 1835, vol. xvi., p. 330) has reported a case in which both patellæ were broken in a similar manner, but at different periods. The girl, aged 29, was admitted into the Penna. Hospital, Oct. 16, 1833. In falling backwards and in making an effort to save herself the right patella gave way. She was dismissed on Dec. 2d.

On April 20th following she was re-admitted with a fracture of the left patella, produced in the same manner as before.

Case 21.—M. De Beauvois (*Med. Times and Gazette*, Oct. 9, 1880, and *Med. News*, Jan., 1881) related at the Paris Societé de Médecine an example of this rare occurrence. A man, thirty years of age, and apparently in good health, was engaged in the game of leap-frog, and having struck the ground with his feet, when on the point of springing forwards he felt as if he had received a blow on the legs and heard a crackling sound. He fell on the ground, believing that some one had struck him. On his being carried to the hospital, a transverse fracture of each patella, with a separation of not more than two centimetres, was found to exist.

9 Cases.—There are nine cases where the fracture was caused by a mis-step in going down-stairs, and falling backwards, the patients made powerful efforts to prevent falling:

Lancet, Feb. 15, 1840, p. 770.
St. George Hosp. Reports for 1870.
Am. Jnl. Med. Sci., July, 1848, p. 220.
Lancet, Sept. 5, 1835, p. 748.
Am. Jnl. Med. Sci., vol. xxx. (Haywood).
New Eng. Quart. Journal, July, 1842.
Packard's Malgaigne, p. 600.
Hamilton Fracts. and Disl., 4th Edit. p. 434.

ANALYSIS OF THIRTY CASES.

In aiming a kick, ...	2
In leaping, ...	3
In leaping (double), ...	1
During lithotomy (double), . .	1
In convulsions subsequent to lithotomy (double), ...	2
Effort to prevent falling, . . .	11
Lifting heavy weights, ...	1
Efforts to prevent falling, threatened by a misstep in going down-stairs, ...	9
	—
	30

I believe that muscular exertion is the cause of the vast majority of the cases that are set down as due to traumatism. When a person falls on his knees, the patellæ very rarely touch the ground, the force of the fall is received by the tuberosities of the tibia, and if a fracture of the patella should take place it would be undoubtedly due to muscular action alone. That this must be the case is abundantly proved by the fact that there is, as a rule, no abrasion or contusion of the skin over the patella.

In cases where the fracture is due to direct violence and no muscular force is exerted, the fracture is apt to be in any other than a transverse direction, the skin in many cases being severely pulpefied. I have, upon several occasions, in the anatomical rooms of the Philadelphia School of Anatomy, tried to produce a transverse fracture of the patella upon the cadaver. I have comminuted it, but I have never without using a chisel or similar instrument, been able, to produce a transverse fracture of the patella, because the essential of that fracture the muscular exertion was absent.

Transverse fractures of the patella are very rarely united by osseous tissue, and the reasons for this are sufficiently simple, and may be briefly stated as follows:

a. The intervention of synovial fluid between the fragments.

b. The blood supply of one or both fragments being cut off.

c. Muscular action prevents perfect coäptation.

a. The synovial fluid, when excessive, may be drawn off by an aspirator, or its absorption may be promoted by stimulating lotions applied externally, but if complete coäptation is accomplished and maintained this will not interfere to a very marked extent.

b. The blood supply of the upper fragment is largely cut off, owing to the rupture of the nutrient arteries which come from the anastomoses of the internal and external articular branches of the popliteal artery. The principal blood supply of the upper fragment is derived from the periosteum and from the lower fragment, if it is kept firmly in apposition. As strange as it may seem, this fact is often ignored by surgeons who are called to treat such cases, for by their very treatment they frequently tend still further to diminish the blood supply, by tight bandages, adhesive strips, in fact by nearly all the appliances which make pressure upon the skin over the bone. Thus they defeat the very object which they are endeavoring to bring about.

c. The principal cause in the prevention of ossific union in transverse fracture of the patella is the muscular action. If this be properly overcome and the bone held firmly in position, I cannot understand why the transverse fracture should not unite by bone just as well as the vertical fracture, for the latter certainly must contend against the presence of the synovial fluid, and the probable ruptured nutrient artery, but it has in its favor the absence of muscular action.

I believe it is now an undisputed fact that in transverse fractures uniting by ligamentous bands, the ends of both fragments are very often covered by a bony deposit.—*Edinburg Med. and Surg. Jul.*, 1837, No. 130, Chelius's Surgery, p. 630, vol. I.

This ossific deposit would in most cases have been sufficient to hold the fragments firmly together. This seems to me to indicate that the method of treatment to be adopted is that which holds the fragments in perfect apposition, and, therefore, excludes all synovial fluid from between the fragments, and does not interfere with the blood supply of the affected part.

Some surgeons raise the very serious objection to bony union, that it will form a ridge of callus on the articulating surface, which will be sure to cause serious impediment to the use of the limb. I have been unable to find authentic records of a single pathological specimen of transverse fracture where bony union was claimed by the originators of the various appliances for the treatment of this lesion. Their claims are based upon the examination of living specimens, and it therefore seems to me as though the theory of the ridge of callus was raising an objection not founded upon fact, but merely a possibility.

The same may be said of the surgeons who claim that ligamentous is far superior to any other union after this fracture. The fact that the extensor quadriceps muscle has the *bony* patella to glide over the condyles of the femur, seems to me to indicate that *bone* is the correct substance for the purpose and in case of fracture to secure bony union if possible, and I believe it possible. I can not say that I ever saw bony union, because I did not see the cases after death, but I certainly have seen cases under the care of Dr. R. J. Levis, of this city, that were treated by his modification of Malgaigne's hooks, that so simulated osseous union that no one seemed able to define any separation, and the two patellæ measured very nearly the same.

It is certainly remarkable that patients seem to be able to walk quite well when there is a separation of a considerable distance between the fragments. Benj. Bell makes one inch the limit of separation, allowing of firmness of the knee. Velpeau asserts that he has seen the functions of the joint *completely re-established* with an interval of two or three inches between the fragments. Malgaigne says that such assertions are in his opinion only accounted for by some inaccuracy in examination. He said he never saw the function of the limb completely restored even when the separation was limited to one-third of an inch.

Among the many disadvantages of ligamentous union is its tendency to stretch, an elongation is most certain to follow the fibrous union, and especially is this the case if the patient is allowed to use his limb too soon.

There is a case quoted by Hamilton in his excellent work on Fractures and Dislocations, in whom after three months' treatment by splint the separation was one-half to three-quarters of an inch. The knee was much ankylosed. Soon after this the upper fragment began to draw up and at the end of a year the separation was three inches.

Kirkbride (*American Journal Medical Sciences*, Vol. XVI), has reported a case in which the ligament had stretched two and a half inches.

Dr. Watson (*Watson Jour. Med. and Surg.*, Vol. III, p. 366), refers to a case in which the ligamentous band of union measured three and a half inches.

In case No. 11, of the 30 previously mentioned the ligamentous band measured four inches after seven years. It was supposed to be a case of bony union and the case was noted as such upon the books.

The liability of the new formed ligament to rupture, is a serious objection to this form of union.

Hamilton speaks of two cases (*Hamilton, Fracts. and Dislocations* 4th Edit., p. 436).

Morgagni saw two cases, and others have been recorded by Richter, Ortalli, Dupuytren, Roux, Velpeau and others. I have seen but one case.

Sir Chas. Bell saw a case where the skin gave way at the same time that the ligament ruptured, thus laying open the joint. Subsequently it became necessary to amputate the limb.

The most serious sequella of ligamentous union is the great liability to a fracture of a similar nature of the opposite patella. This is occasioned by the increased strain placed upon the sound side by the presence of defective union of the side first fractured.

In case No. 11 the second fracture occurred seven years after the first one.

In case No. 20 the left patella was fractured six months after the right one.

The great necessity of striving, by all honest means, after bony union in cases of this kind of fracture is evident, for even though osseous union be not attained, the shorter the bond of union the better. "For it is found that the "joint will always be weak and unpro-"tected precisely in proportion to its "length and thinness."—*Gross, System Surgery*, 5th Edit., p. 946.

As I have previously said the reasons why this fracture does not unite by osseous tissue are :

a. Presence of synovial fluid between the fragments.

b. Faulty nutrition, due to rupture of the nutrient vessels or compression.

c. Difficulty of maintaining complete coäptation.

It therefore follows that the treatment to be adopted is that which overcomes these difficulties best, and at the same time does not endanger the patient's life.

It is stated *(Med. and Surg. Reporter*, Nov., 1874), that at the Hospital Laribosière, the surgeons becoming convinced that bony union cannot be attained, " dispense with all apparatus " to coäptate the fragments, which is " perfectly useless, as whatever is done " the surgeon can hardly expect any " thing more than a fibrous union which " after all does not interfere with loco- " motion."

" Dr. R. J. Levis, of Philadelphia, " *(Med, Times*, Dec. 5, 1874), says he " has seen three instances in which frac- " ture of the patella was left without " further treatment than a state of rest, " no attempt being made to secure " mechanically the coaptation of the " fragments. In one case the fracture " was associated with other injuries al- " most necessarily of a fatal character, " but the patient survived for nearly " three months. In another instance " the fracture was complicated with " severe injuries of the limb which " were attended with such great swel- " ling that the fracture was not recog- " nized until after the lapse of more " than two months.

" In the third case the fracture was " treated as a simple *sprain* with rest " alone by a Homœopathic surgeon and " the patient came ultimately under my " care on account of permanent disa- " bility of the limb, due to a separation " of the fragments of not less than *five* " inches. In each of these cases the " separation of the fragments remained " far greater than I have ever seen it " as the result of ordinary treatment, in " which approximation is effected as " thoroughly as possible."

The serious objection to the various appliances which aim to maintain coäption through the medium of the skin is that they tend still further to reduce the blood supply of the fragments, and do not keep the fragments in that perfect state of approximation which is absolutely essential for the production of osseous union—therefore it seems to me that they should be discontinued as unscientific.

The above objections cannot be raised against those appliances which act directly upon the bone, and these appliances are hooks originated by Malgaigne and modified by Levis and Morton, and the wiring together of the fragments.

Malgaigne was the first to use the patella hooks, and his uniform good results caused other surgeons to resort to this form of apparatus.

About 1877 *(Med. and Surg. Reporter*, Aug. 31st, 1878), Dr. R. J. Levis of Philadelphia, while using Malgaigne's double hooks in a case of fracture of the patella was impressed by the fact that the double hooks implied that the patella was a symmetrical bone, but as it was known not to be so, it occurred to him that single hooks would be much preferable, and he had made an instrument with two hooks instead of four. The general principle of the hooks has remained the same, but the attachments have been somewhat changed, until now the hooks are held together with a rachet on a pinion, greatly facilitating the application, and removal.

M. Nelaton *(Clin. Surg.*, Translated by Atlee, p. 171), used the hooks a " number of times, but never found any " of those inconveniences to result from " its use which have been so singularly " exaggerated."

Campbell De Morgan *(Am. Jnl. Med. Sci.*, July, 1863, *Brit. Med. Journ.*, May 24th, 1862), mentions the fact that a large number of cases have been treated by means of Malgaigne hooks in the Middlesex Hospital and the results were most satisfactory.

Mr. Mitchell Henry, *(Lancet*, Aug.,

1860, p. 146), saw the hooks in use for many years in Malgaigne's wards in Paris without any serious inconveniences.

I have had opportunities of seeing quite a large number of cases in the Pennsylvania Hospital treated in Dr. Levis' wards by his modified hooks, and am convinced that if bony union was not attained, it was impossible to determine the space between the fragments, and I cannot remember one instance of serious difficulty arising from the hooks.

Cases when admitted to that institution are usually allowed to remain quietly in bed for a week, the leg and thigh being bandaged to control muscular action. Attention is paid to the inflammatory condition of the parts, which is reduced as speedily as possible with solutions of acetate of lead, etc.

The hooks are applied generally about one week after the receipt of the injury, and are permitted to remain for about four weeks, when very gentle passive motion is indulged in. The patient is not allowed to rest his weight on the affected side for at least two months after the accident.

Sir Astley Cooper, (Sir A. Cooper, *Surg. Essays*, Vol. II., p. 350), performed a series of experiments upon rabbits with reference to the solution of the question,—Why does not the patella unite by bone? In experiment VI, having divided the bone by means of a chisel, he sewed the two portions together, the suture being passed through the tendinous covering of the bone, but the ligatures separated and the bone united by ligament.

It is quite evident that Sir Astley Cooper had grasped the thought of wiring the fracture in the human subject, but it does not seem to have made much impression, either because of its failure in the experiment or because his mind was occupied in watching intently the phenomena of repair. I am not aware of any application of this principal to the human subject made by Cooper.

But Mr. Lister *Med. and Surg. Reporter*, Jan. 12, 1878), cut down upon the fragments in a case and drilled the two portions of the patella and tied them together with silver wire. Six weeks after the operation the wound was completely healed, the ends of the wire projecting through the scar. There was in this case no constitutional disturbance and the patient obtained excellent use of his limb. Dr. John Rhea Barton performed a similar operation, but lost his patient—*Gross, System Surgery*, 5th Edit., vol. I, p. 1,004.

Dr. T. M. Logan performed this operation once. (*Pac. Med. and Surg. Journ.*, Dec., 1866), (*Agnew's Surgery*, Vol. I., p. 781). The fracture had existed for nine weeks when the wiring was done. The wire remained six weeks, the patient being kept under treatment for four months and a *cure* is recorded.

Dr. J. E. Van der Meulin, of the University of Utrecht Cameron of Glasgow (*Hamilton Fracts. and Dislocations*, Edit. 1880, p. 516), Mr. Rose of London (*N. Y. Med. Journal*, May, 1876, page 463, *Med. Rec.*, April 3, 1880, p. 384), G. McClelland (*N. Y. Med. Journal*, May, 1876) have recorded cases, but I believe the procedure to be such a dangerous one, presenting no superiority over the hooks when properly applied, that I believe it should be resorted to only after every other known method has failed; and even then only after a deliberate study of the cases previously operated upon.

In closing I would say that it is my conviction that the hooks are the only scientific method of treating transverse fracture of the patella.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

On the Treatment of Typhoid Fever.

By SIR WILLIAM JENNER, Bart., M.D., K.C.B., F.R.S., Consulting Physician to University College Hospital, London, Eng.

I have never known a case of typhoid fever cut short by any remedial agent—that is cured. The poison which produces any one of the acute specific diseases (to which order typhoid fever as much as small-pox belongs) having entered the system, all the stages of the disease must, so far as we know, be passed through before the recipient of the poison can be well. If the patient can be kept alive for a definite time, the specific disease ends, and then, if no local lesion remains to constitute a substantive disease, the patient is well. The treatment of typhoid fever is essentially rational. To treat a case with the best possible prospects of success, the physician ought to be acquainted with the epidemic constitution of the period, the etiology of the disease, its mode of attack, its natural course, the order of appearance, and the natural duration of each of its symptoms; the way in which each symptom influences the termination, the several pathological lesions which produce or may produce each special symptom, and the complications to be watched for at each stage of the disease.

Certain facts have to be kept in mind when treating a case of typhoid fever, and when estimating the effect of remedies: First, that the disease, in the majority of cases at least, is produced by the action of a small portion of the excreta from the bowel of a person suffering from typhoid fever; that air from a drain, or air blowing over dried feculent matter, may convey the poison to the patient, or his own fingers may carry it to his mouth, or that the vehicle for the poison may be a fluid—for example, water or milk; and that the poisonous properties of the excreta may be destroyed by boiling the fluid in which they are contained, though not by filtering the fluid. Secondly, that the natural duration of a well-developed case of typhoid fever is from twenty-eight to thirty days. Hence subsidence of the fever before that date should be regarded with suspicion, and the patient not treated as if the specific disease had ended, while the continuance of febrile disturbance after that date should lead to repeated and most careful examination of the patient, in order to ascertain if any local lesion is keeping up the febrile excitement. But not only is this duration of the specific disease limited, but the prominent symptoms have their regular order of sequence, and several their own natural limits of duration—that is, a time to begin and a time to end; and the natural termination of a symptom has often been attributed to the remedial agent last employed.

In the earliest stage of typhoid fever the patient is prone to commit certain mistakes in treating himself, either of which may add greatly to the severity of the coming illness. (1) He may think that he has a common cold in his limbs, as it is called, and try to throw it off by strong exercise. A certain sense of weakness accompanies this early stage of the fever, but it is rarely so great as to prevent the patient, if stimulated by strong will, walking long and briskly. (2) He may consider that he is suffering from biliary derangement, and attribute to this the headache, disturbed nights, sense of malaise, want of appetite, and disordered bowels, and take a dose of drastic aperient. (3) He may think the weakness he feels is to be removed by food and wine. A dose of medicine, he says, cannot hurt ; bed, he thinks, weakens ; and food and wine, he knows, restore strength ; therefore he prescribes a dose for himself which irreparably injures his bowels ; he takes exercise which increases the waste material in his system, and he loads his stomach with food it cannot digest and stimulants which heighten the fever and disturb the action of the eliminating organs, and then pays the penalty perhaps with his life, for the errors his ignorance has led him to commit.

The thermometer saves, or ought to save, the physician from the patient's mistakes. The temperature having rendered it even *possible* that the ill-defined and may be trifling symptoms are due to the poison of typhoid fever, the patient should be absolutely confined to bed. Exercise or fatigue immediately before or after the absorption of the poison, and especially when the action of the poison is manifesting itself, increases the gravity of the disease, partly by exhausting the nervous power, but chiefly, I think, by causing destruction of tissue, and so the presence of waste material in the system on which the poison can act ; and at the same time, by disturbing the action of the eliminating organs, it leads to the retention in the system of the products of the destroyed tissue.

Some of the worst cases of typhoid fever I have ever seen have appeared to me to owe their gravity to the patient having travelled, after the commencement of the sense of illness, in order to reach home. I very rarely advise a patient's removal to his home, if that be distant, so satisfied am I that the fatigue of travel, whether by rail or carriage, tends to make what would otherwise have proved a mild case severe, and to cause a bad case, which might after perhaps a struggle have ended favorably, to terminate in death. Not only is other tissue-destruction than that due to the fever process in a great degree prevented by rest in bed, but the nervous system is there less liable to disturbance, any tendency to moisture of skin is favored, the elimination of the products of waste tissue is unchecked, and chances of error in diet diminished. The air of the room should be as pure as possible ; the room in which the patient is placed be large enough to permit it being freely ventilated without draughts ; if possible, the patient should occupy a different room at night from that used in the day.

From the first the patient should be restricted to liquid diet, with farinaceous food, and bread in some form if the appetite requires it. It is better to vary the broths, and to add to them some strong essence of vegetables. Sometimes a little strained fruit juice is taken with advantage, but skins and seeds of fruits and particles of the pulp are frequent sources of irritation of the bowel. Grapes are always dangerous from the difficulty of preventing the seeds slipping down the throat. The value of milk as an article of diet in fever is generally admitted, but it requires to be given with caution. The indiscriminate employment of milk in almost unlimited quantities as diet in fever has led to serious troubles. Milk contains a large amount of solid animal food. The casein of the milk has to pass into a solid form before digestion can take place. Curds form in the stomach, and, the digestive powers being weakened in fever, these curds may remain unchanged in the stomach, and produce considerable disturbance of system.

I have seen the patient restless, sleepless or drowsy, his temperature raised several degrees above what it had previously been, vomit, eject a quantity of curd, and at once the restlessness cease, the temperature fall, the skin become moist, and the patient drop into a quiet sleep. All the threatening symptoms vanish with the ejection of the offending material. Or the undigested curds may accumulate in the bowel, inducing flatulent distension and pain in the abdomen, restlessness, and increased febrile disturbance. Under these circumstances, I have seen an enema of thin gruel bring away a large vesselful of offensive, sour, undigested curds. Or, again, the undigested curds may themselves (and this has not been an uncommon consequence of milk diet in my experience) irritate the bowels, and produce, keep up, or greatly increase diarrhœa. A distinguished chemist once remarked to me, "Do not forget that a pint of milk contains as much solid animal matter as a full-sized mutton chop;" and solid the casein of the milk must become before it can be digested ; and yet I have known a patient drink two quarts and even more of milk in twenty-four hours—*i. e.*, solid animal food equal to four mutton chops. Can anything approaching to such an amount of solid animal food be digested, and, if it could, is such an amount of animal food good for a patient suffering from typhoid fever ? He is weak because of the presence of the fever, and not from lack of food.

Patients suffering from typhoid fever should be allowed an unlimited supply of pure water. When pure water is freely absorbed, it passes away by the kidneys, skin, lungs, etc., and is of much service as a depurating agent. If it be *possible*, even, that the poison of the fever was conveyed into the patient by the drinking-water or the milk of the district in which he is ill, then these fluids should be boiled till a different supply is obtained. All sources of foul air from drains or cesspools should be sought for, and the air the patient breathes be freed from all possibility of impurity ; disinfectants should be placed in the close-stool, and the dejecta buried if possible. If the bowels are confined in the early stage of the disease, a simple enema should be given. Hard stool retained in the bowel will produce irritation, and it may be catarrhal inflammation of the intestinal mucous membrane, and so induce troublesome diarrhœa. Small doses of mineral acid, well diluted, are grateful to the patient, and may perhaps be useful.

The fever is thus met by rest, quiet, fresh air, mixed liquid food and bland diluents, and the exclusion of fresh doses of poison ; the intestinal lesion by the careful exclusion from the diet of all hard and irritating substances, and the removal from the bowel of any local irritant.

Frontal headache and sleeplessness are two symptoms of the early stages of typhoid fever which may cause the patient much distress. The headache is in some cases alleviated by cold and in others by warm applications ; but as the headache ceases spontaneously in about ten days from the outset of the fever, no active treatment is required for its cure. Local applications, the exclusion of light from the room, and absolute quiet, have been all the means I have seen necessary for its relief. Sleeplessness is a more important symptom, for although it also usually disappears or diminishes spontaneously during the second week of disease, still this is not invariably the case ; and the nervous system may be greatly worn by the want of sleep, lasting as it does, occasionally, unless treated night and day. The drugs I employ when, from the continued sleeplessness, it seems absolutely necessary to relieve it, are henbane, bromide of potassium, and chloral. From a combination of the latter I have seen very good results, and, so far as my experience has gone, no really ill effects when its use has been limited to the earlier stages of the disease—*i. e.*, to the period anterior to signs of nervous prostration. If the patient's temperature be high, a tepid bath or sponging the surface will often at once induce sleep, and no drug be required. In the earlier and also in the later stages of typhoid fever the sleeplessness has been treated by opiates. Experience has convinced me that although, in some cases, opium in sufficient dose to secure sleep has afforded relief, it is on the whole a most dangerous remedy. In the early stage of fever it disturbs digestion and checks secretion. In the later stages of the disease I have seen several cases fatal from its influence on brain, heart, and secreting organs. To my mind, the hoped for and occasionally attained good is altogether outweighed by the disproportionately possible evil and occasionally fatal effect resulting from the administration of direct sedatives, opium and chloral, in the later stages of fever.

So long as the stools do not exceed three to five of moderate quantity in twenty-four hours, the looseness of bowels is rather advantageous than injurious ; but when, from their number or from their quantity, there is risk of the strength of the patient being reduced to a dangerous degree, then it becomes necessary to restrain the diarrhœa. The treatment varies with the pathological condition which induces the diarrhœa It is often sufficient to examine the stools to detect the cause and remove it—*e. g.*, curds of milk. Inquiry may prove the great excess of the fluid taken into the stomach over that passed by kidneys and skin. When the stools are strongly alkaline diluted sulphuric acid sometimes affords marked relief. When the stools are merely frequent four ounces of starch water thrown into the rectum night and morning will often check the frequent action. Should this not prove efficacious, from three to ten drops of laudanum in one ounce and a half of starch water may be thrown into the bowel night and morning *after* the passage of the stool. When very offensive, correctives of fetor should be given ; a teaspoonful of charcoal may be given two or three times a day. Under its influence I have seen the stools lose their fetor and ammoniacal odour, become less liquid, and in many cases the irritation from the catarrhal inflammation of the mucous membrane diminished. The greatest possible care should be taken that the charcoal is in impalpable powder ; animal charcoal has, in this respect, some advantages over vegetable. Other correctives of fetor, or antiseptics, will have as good effect as charcoal, but this has given me such satisfactory results that I have not resorted to other remedies of its class.

Carbonate of bismuth, in twenty-grain doses every four or six hours, is one of the best remedies I know for the catarrhal inflammation of the bowel itself. If the fluid poured out be very excessive, then a vegetable astringent, as catechu and kino, may be given with the bismuth, and, should these means fail, three to five drops of laudanum must be added to each dose of the mixture. The use of opium, even in this dose, by the mouth, should be avoided if possible, as, by interfering with the action of excreting organs, and by its other effects on the nervous system, it may do more harm than the symptom for which it is prescribed. The administration of opium should if possible be limited to the bowel.

When blood in ever so small a quantity is observed in the stools, the patient is to be kept in the recumbent position. He should not be allowed to make any effort, and on no consideration to sit on close-pan or raise himself or be raised by others to pass urine, etc. If the patient is unable to pass urine when in the recumbent position, the urine should be drawn off by catheter. All movement of the bowels should be restrained as far as possible and for as long as possible. An ounce of starch-water with ten or fifteen drops of laudanum may be given at once as enema, and then a dose of acetate of lead every two or three hours by the mouth, with three to five drops of laudanum, or fifteen grains of gallic acid in a wine-glass of iced water every two or three hours with the laudanum. I think I have seen benefit from small doses of turpentine. It is a point of the greatest moment to keep the bowels empty, and therefore nourishment should be given in the most concentrated and absorbable form—*e. g.*, essence of meat in tablespoonful doses frequently repeated. All nourishment which leaves solid residue —*e. g.*, milk—should be avoided. Lumps of ice should be sucked, and all essence of meat, etc., be iced. When the loss of blood is sudden and copious, or is frequently repeated, the subcutaneous injection of ergotine may be employed, and an ice-bag applied over the region of the ilium. The faintness due to considerable sudden bleeding from the bowel should not be removed by stimulants unless it immediately threatens life.

From the commencement of typhoid fever the temperature of the patient is elevated. This elevation of temperature is the direct result of excess in destruction of all the tissues of the body. The patient loses weight, and continues to lose weight so long as he is subject to the fever, so that Zimmermann fixed the duration of typhoid fever by ascertaining how long after the onset of the disease the patient ceased to lose weight. In local inflammation the temperature of the inflamed part is greatly in excess of the temperature of the body generally. In uncomplicated typhoid fever the elevation of temperature is practically uniform in all parts of the body. Local inflammation, blood-infection, and nerve-disturbance, are common causes of great increase of the temperature above that *proper* to any given case of typhoid fever—*i. e.*, due to the action of the fever poison on the system generally. Thus inflammation of the mesenteric glands is frequently excited by fetid or acrid matters conveyed to them by the lymphatics from the raw and inflamed intestine, and blood-infection may owe its origin to the same cause. Congestive nephritis and pnuemonia are common lesions in typhoid fever, and are common causes of increase of temperature. The power of the nervous system to raise the temperature, or to produce sudden changes which raise the temperature, in typhoid fever, is well illustrated by the sudden rise which frequently follows mental emotion. I have known the temperature start from this cause from 102° to 106°. In the progress of typhoid fever local inflammations cause more or less permanent elevation of temperature ; blood-infection rapid, and sometimes temporary, always varying, elevations of temperature ; nerve-disturbances rapid and often transient elevations of temperature.

The treatment of typhoid fever by

cold baths, when the temperature reaches 104°, or even less, is very generally adopted in Germany; but neither my own limited experience nor the evidence adduced by others in its favor has carried conviction to my mind of its advantage. At the same time I entertain no doubt that the direct cooling of the body is in some cases essential to the preservation of the life of the patient—gives him, so to say, his only chance of recovery; while in others it alleviates the severity of a symptom which increases the danger of the patient.

A certain degree of elevation of the body is incompatible with the favourable progress of the case. Thus a temperature of 106°, rising to 107°, and still advancing, will, unless lowered by treatment, speedily end the life of the patient; for these fortunately very rare cases the direct and rapid depression of the patient's temperature by the cold bath is essential—is the only source of hope. Again, a temperature of 105°, if continuous for forty-eight hours, or broken only by a slight fall of short duration, may itself, by the degenerative changes it favours or produces in the heart and other organs, cause the fatal termination; for these cases a tepid bath gradually cooled down is sufficient to bring down the temperature; the bath has to be repeated as the temperature rises. Persons at an age when degenerative changes of tissue naturally occur suffer more from continued high temperature than do younger persons. If the disease be advanced, the skin dry, the patient prostrate, and the internal organs congested, especially the kidneys, a tepid or warm pack is often followed by marked improvement in temperature and in other symptoms. When the temperature is for some time 103½° to 104½°, and even higher, cold effectually applied to the head (*e.g.*, by the india-rubber tubing cap) will often suffice for its reduction —reduction, that is to say, not only of the temperature of the head, but of the body generally; when the temperature falls the cap should be removed, but be reäpplied as often as it rises again. Tepid sponges will reduce the temperature a little, and soothe and quiet the patient if he be restless and sleepless.

Thus limiting the employment of direct means of lowering temperature, I have seen none of the ill effects which are said occasionally to follow its vigorous use—viz., collapse and failure of the heart's power; while I have seen what has appeared to me to be indisputable good follow its employment.

Other means are used to reduce temperature. When the high temperature is conjoined with rapid feeble heart's beat, when the patient is advanced in years, or when the extremities feel cold, though the temperature of the body generally is high, a fall of temperature frequently follows the administration of alcohol. Quinine, in occasional large doses or in smaller doses repeated at intervals, has been followed by reduction of temperature in typhoid fever. Salicylate of soda is said also to have a like effect. When judging of the effects of these and other drugs for reducing temperature, one must not lose sight of the fact that sudden fall of temperature when no drug is given is of not unfrequent occurrence, and also that the temperature varies daily. This natural fall of temperature I have seen attributed to the drug. I must say that I have been disappointed in the effects of the two drugs I have named as reducers of temperature, while I have seen both occasionally do much harm by disturbing the stomach and interfering with digestion. In a disease which runs a limited course, like typhoid fever, the greatest possible care should be taken to preserve the powers of the stomach, as the life of the patient may depend on his power to digest nourishment towards the end of the disease.

Typhoid fever cannot be cured by perspiration, but the patient suffers much less discomfort and is less restless when the skin is gently moist. The most certain means for producing gentle perspiration I know is the application of a large warm and moist flannel covered with oil silk over abdomen and chest, and the administration of warm bland fluids. In the latter stages of the disease, profuse and most exhausting perspiration sometimes occurs. The perspiration is kept up and greatly increased by the heat of the patient's body and the moisture of the perspiration itself. To prevent chill, the nurse carefully covers the patient; thus, with a relaxed skin disposed to sweat, he is kept, so to say, in a prolonged vapor bath. I have seen lives lost from the asthenia thus produced. To restrain this profuse perspiration, the patient's skin should be dried with a warm napkin every few minutes if necessary, and dry clothes placed between the wet linen and the skin. Alcohol should be given at the same time to stimulate the nervous system and increase the force of the heart's action. Sponging with tepid vinegar and water is sometimes of much service.

Delirium is, as a rule, one of the symptoms which are influenced for good by alcohol, but it is one in which the effects of the alcohol should be most closely watched. When alcohol is contra-indicated or proves useless or injurious, the head should be shaved and cold applied either by an ordinary ice-bag or by the cold water tubing cap, or the head may be kept cold while the force or the heart's action is maintained by alcohol.

There is one nerve system to which I attach great and grave significance, and which is a guide to treatment—it is tremor.

Tremor is sometimes so great that the patient is unable to protude his tongue; his jaw trembles, and his voice quivers; and if he attempts to hold any vessel, he spills its contents, not from weakness or drowsiness, but from shaking of the hands. Tremor out of all proportion to other signs of nervous prostration is evidence of *deep* destruction of the intestine. A small *deep* slough will be accompanied by great tremor; a large extent of superficial ulceration may be unattended by symptoms. Now it is deep ulcers following separation of deep sloughs which are especially liable to give rise to severe hæmorrhage and perforation. In these cases of tremor alcohol should always be given to increase nerve energy, and so to limit the sloughing and ulceration to what is the direct consequence of the specific process.

I may sum up my experience in regard to the use of alcohol in the treatment of typhoid fever thus: Its influence is exerted primarily on the nervous system, and through it on the several organs and processes; for example, the heart and the general nutritive processes—changes on which the rise and fall of temperature depend. In judiciously selected cases it lowers temperature, increases the force and diminishes the frequency of the heart's beats; it calms and soothes the patient, and diminishes the tremor, it quiets delirium, and induces sleep. It should never be given in the early stage of the disease, or with the hope of anticipating and so preventing the occurrence of prostration and debility, but should be prescribed only when the severity of special symptoms, or the general state of prostration, indicates its use.

Hence a large number of cases of typhoid fever end favorably without alcohol being prescribed from the beginning to the termination. It should not be prescribed when a sudden gush of blood has induced faintness, unless the faintness is so great as to threaten life immediately. Nor should it be given when, after the first few doses, the temperature rises, the heart's action becomes more frequent or more feeble, delirium increases, sleeplessness supervenes, or drowsiness deepens, so as to threaten to pass into coma. When the urine contains a considerable quantity of albumen, alcohol should not be prescribed, unless absolutely necessary for the relief of some symptom immediately threatening life, and then it should be given with the greatest caution, and its effects on temperature, the circulation, and on the urinary and other secretions, both as to quantity and quality, be carefully and frequently noted. The quantity of alcohol prescribed should be as much only as as may be necessary to effect the object for which it is prescribed. In the fourth week, to tide the patient over the concluding days of the disease, it may, as a rule, be given more freely than in the second or the beginning of the third week of the disease, but it is in exceptional cases only that more than twelve ounces of brandy in the twenty-four hours can be taken without inducing some of the worst symptoms of prostration. Nearly all the good effects of alcohol, when its use is indicated, are obtained by four, six, or eight ounces of brandy in twenty-four hours. Taken in excess—even when in smaller quantities it would do the patient good,—it dries the tongue, muddles the mind, or induces delirium or drowsiness approaching to coma, and diminishes the action of the secreting organs, on the healthy action of which the elimination of the materials destroyed by the action of the fever poison depends. For the last thirty years I have made it the rule of my practice in the treatment of typhoid fever to abstain from giving alcohol if, in the case before me, I *doubted* the wisdom of givng it; when in doubt I do not give alcohol in typhoid fever, and when there is a question in my mind of a larger or smaller dose I, as a rule, prescribe the smaller. The reverse of the rule I laid down for myself in the treatment of typhus fever.—*Lancet.*

The First Visit of Beri-Beri to the United States.

[Some excitement has been lately produced among our medical men and in the community in general, by the introduction into out port of a disease known in the United States hitherto only by stray scraps of its history abroad. The novelty of the subject has induced us to give to our readers the following article, though out of place, rather than defer it. It is kindly furnished by the ship surgeon and contains a plain and valuable account of the disease as it fell under his observation. To Dr. Donnelly we are under obligation for his excellent translation of it, and also for his own comments. A thorough investigation of the disease, such as has never before been made, is in charge of Dr. Hebersmith, assisted by Professor Hirschfelder and other gentlemen, and will appear in an official report.—*Eds. Pacific Medical and Surgical Journal.*]

BERI-BERI.

By GALDING CICERO DE MAGALHAES, M.D., Surgeon Brazilian Navy.

[Translated from the Portuguese manuscript of the author on board the Brazilian corvette Vital de Oleiveria, by E. DONNELLY, M.D., San Francisco, California.

Beri-Beri is a constitutional disease

of an infectious nature, whose etiology is unknown; assuming a mixed condition of paralysis and œdema, characterized by dyspnœa; disorder of the organs of digestion, of respiration, of circulation, and principally of the nervous system. The disease properly belongs to the tropical regions, where it prevails endemically or epidemically. In its attacks it is either acute or chronic, mild or malignant.

First period or invasion of the disease: The patient becomes listless and in a condition which he is not able to define; he feels a want of energy, and inability from weakness to do any work; the gastric functions are torpid, and there is a feeling of fullness in the stomach, and a want of appetite. The weakness is accompanied with drowsiness and torpor, principally in the lower extremities, which soon become painful. It will be noticed about this time that there will be some swelling about the ankles, and sometimes the feet and hands.

Second period: Apogee or acme of the disease. The general weakness increases, and the pains extend and become more severe in the upper and lower extremities; anæsthesia and debility increase; œdema of the muscles occurs, with pain, particularly in those of the calf of the leg, while the skin of those parts is insensible; vomiting commences and the food causes oppression of the stomach. The patient feels a strong constriction around the pelvis, which little by little ascends to the thorax, producing great inconvenience. This symptom is known as the "beri-beri cincture" or girdle. There is dyspnœa, more or less intense, approaching at times to orthopnœa; the œdema of the extremities is hard and elastic, and by degrees invades the whole body. The patient gradually loses the power of moving, the sight diminishes, insomnia and hypochondria add to his sufferings; the patient is impotent and incapable of having an erection; the voice becomes hoarse and the utterances almost unintelligible. The pulse diminishes gradually in force.

Third period or termination: When the termination is favorable the symptoms decrease until the complete reestablishment of health, and vice versa. In the first case the gastro-intestinal functions are the first to return to their normal condition, the appetite returns, the cerebral perturbations also gradually cease; the nervous phenomena, such as numbness and want of sensibility, paralysis, etc., are the last to disappear. In case of a fatal termination all the symptoms increase; the hoarseness becomes aphonia, the amblyopia amaurosis, and the paralysis becomes complete. Increased insomnia ensues with excruciating pains in the muscles, complicated with a horrible dyspnœa that passes to orthopnœa, the patient finally succumbing asphyxiated in consequence of the paralysis of the respiratory muscles. · Serous congestions also affect the brain and medulla, aiding in causing death.

Generally the patient retains complete control of his mental faculties to the last moment.

Patholcgical anatomy: The blood contains a great deal of water, with a few solid elements, an excess of sulphuric acid, soda, phosphates of lime and magnesia, a small quantity of phosphoric acid, potassa, fibrin, globules, albumen and extractive matter. Its color is dark red and it emits a peculiar odor. Generally the meninges are congested (hyperæmic), and the arachnoid and pia mater infiltrated; the liquor cerebro-spinal is sometimes augmented; the cerebral lobes infiltrated and injected; the gray substance softened.

The arachnoid meninges are oftentimes hyperæmic. The hyperæmia is sometimes located in the lumbar region or is general.

Sometimes we have an excessive serous infiltration, in many other cases we encounter a collection of liquid between the dura mater and the arachnoid, a liquid that might be termed sanguinolent. The medulla is all or partially congested, and possibly more or less softened or diffluent. There is found dispersed in the pleural cavities of those that succumb a dropsical fluid, varying from 300 to 800 grammes. This liquid is tinged yellow or bloody, containing numerous coägula of a jelly-like appearance. The lungs are frequently congested and more or less œdematous. In the paralytic cases the lungs are more or less filled with black blood. The heart is ordinarily voluminous, discolored, filled with black blood, sometimes fluid and sometimes coägulated. In individuals in whom anasarca predominates, the pericardium contains from 15 to 100 grammes of clear blood-colored serum. In the peritoneum is encountered an accumulation of serum, varying from 300 to 1000 grammes in the patients that die of the œdematous or mixed form. In the intestinal mucous coat we also find hyperæmia; the kidneys are congested, and in some rare cases atrophied. We have also encountered in various autopsies the arachnoid meninges injected; ecchymose spots on the emerging points of the roots of the nerves, dilatation of the right ventricle, and congestion at the base of the lungs, the liver, etc.

Treatment: External frictions along the spine and paralyzed members, with tincture of arnica and acetate of ammonia, nux vomica, veratria, jaborandi, the liniments of turpentine, laudanum, camphor, etc.; light blisters or sinapisms along the vertebral column; tincture of iodine; baths, hot and vapor; electricity. The tonics, with a strengthening regimen formed the basis of the internal treatment. Arsenic and sulphate of strychnia accompanied the tonics; ergotin, nux vomica and phosphorous were used with some benefit. The solution of Fowler is preferred by some. Arseniate of iron has also been used. The alteratives, such as mercury and the iodide of potassium, have been used to combat secondary manifestations which were indicated. The sulphate of quinine given as an antipyretic did not modify the march of the disease. With the intention of modifying the hyperæmias of the liver and lungs, accompanied by precordial oppression and orthopnœa, blisters, and calomel in alterative doses, were used; scarified cupping gave some relief in visceral congestions. In the dropsical forms, purgatives, diuretics and diaphoretics were given, such as digitalis, squill, scammony, acetate and nitrate of potash, cainca, taraxacum and elaterium; the sulphate and citrate of magnesia, and ammonia, etc.; all have been tried with various results.

But all experts agree that of all the remedies and means used there is not any so valuable as perfect hygiene, change of air, good surroundings of the locality selected, substantial and easily digested food, and especially is it necessary to leave the place where the disease was contracted.

NOTE BY THE TRANSLATOR.

I will add that having visited the patients at the Marine Hospital and conversed with and examined them, I can confirm all Dr. Magalhaes has said in regard to the symptoms and course of the disease in its different stages. Dr. E. Hebersmith, surgeon of the hospital, is making careful observations regarding the disease, both medical and surgical, and his pathological labors will be published by the government at the proper time. Dr. Magalhaes informs me that the disease made its first appearance in South America during the Paraguayan war (1865 to 1870) amongst the Brazilian soldiers and sailors in the second year of the war. Many of both arms of the service died, the surgeons not knowing what it was or the proper mode of treatment, thinking it was an hyperæmia or feebleness from the great exposure in the damp and hot climate of Paraguay. The true nature of the disease was discovered when the soldiers were sent to the hospitals of Rio and Bahia, and to Dr. Silva Limo is due the credit of first making it known to his colleagues. It was then that the surgeons of the army and navy began to treat the disease as beri-beri. The cruise of the Brazilian man-of-war Vital de Oliviera, now in our harbor, is interesting in a sanitary point from the fact that the intelligent surgeons protested from the start that the vessel was not supplied with proper food for such a long voyage, not having any fresh vegetables, not even potatoes, no liquid stimulants or lime juice, no woolen clothing, and having badly ventilated and confined quarters. The infirmary, located in the prow of the ship, had no ventilator, and is so dark that a lamp is required to see the patients in day time. The corvette left Rio de Janeiro on the 14th of November, 1879, going to Lisbon, Gibraltar, Toulon, Malta, Port Said, Ishmael, Suez and then to Aden, where the disease first appeared, and increased from Aden to Point de Galle and Ceylon. From the latter place the patients improved and there was an amelioration of the disease; short trips were made from Ceylon to Singapore and Hong Kong. With fresh food, wine, baths, arseniate of soda and strychnia, ferruginous preparations and quinine, the sick improved very much. The ship remained eighteen days at Hong Kong, during which time it rained a great deal and the men suffered from diarrhœa and dysentery. From Hong Kong the vessel sailed to Nagasaki and Yokohama, Japan, where it remained ten days, during which time it rained continually. The ship's company was exposed twenty-eight days to rain and intense heat in these latitudes. From Yokohama it required forty-four days to San Francisco, during which time the men again suffered for want of proper food and clothing, wet bunks,and their small space for sleeping superheated by three fires or cooking galleys, and no stimulants. Out of 190 men composing the crew, and twenty officers, five died from Japan to San Francisco and four have died in hospital here. Sixteen are left in the Marine Hospital and the balance resume the voyage. The officers and crew are all young men, the latter mostly Indians of pure blood from the northern provinces of Brazil.

Sanity and Insanity.—*Interesting Abstract.* By the Editor of the *British Medical Journal.*

Those members of the British Medical Association who expected to hear something interesting in the Section of Psychology from Dr. Crichton Browne were not disappointed; the address was one of the most brilliant ever delivered before the Association. The tendency of specialism, or of one of them—for there are many—is generally to magnify the specialty. Dr. Browne certainly does not depreciate the importance of his; his conversance with its vast interests, many-sidedness, and interesting relations could not allow him to do so. But it will have been noted that his opening sentences claimed no undue place for it. Thus he coincides entirely with the opinion of the General Council of Medical Education and Registration, who decline to recommend the licensing bodies of the country to make mental diseases a subject of separate examination for all degrees and licences to practice medicine. If some limitation of the arduous and varied curriculum compulsory on medical students is not to be looked for in the immediate future, or some extension of the term of study; if, for example, anatomy, physiology, and pathology may not be taught and looked upon as different aspects of the same questions, certainly no extension of that curriculum could be tolerated by men who are already groaning under a weight of detail that is well-nigh insupportable in course of study extending only over five years at most. Dr. Browne suggests that some test of proficiency in medical psychology might fairly be exacted from men who proposes to devote themselves specially to lunacy; but it would be unfair to make such a demand on the candidate for the ordinary licence to practice medicine. Yet, if any subject may be said to be particularly urgent in its claims upon us, it is this one of lunacy. To begin with, the figures issued by the Commissioners show the startling fact that pauper lunacy has practically doubled in the twenty years from 1859 to 1879. The number of pauper lunatics in England and Wales in the former year was 31,782, and in the latter 62,107. At the same dates, the number of lunatics paid for, either by themselves or their friends, were 4,980 and 7,778 respectively. In these, the increase amounts to 56 per cent. As there is no reason to believe that the public are less unwilling now than they were twenty years ago to permit their relatives to be classed among the insane, the figures relating to those lunatics who could pay for themselves may be taken as illustrative of the real increase in lunacy. Better registration may account for some of the increase among the pauper class; but it is credited highly, and we think, if 44 per cent, of that increase be attributed to it, even then, lunatics would be half as numerous again in 1879 as they were in 1859, which is a much higher ratio than the increase of the population in the same period. But, as Dr. Browne points out, this increase, large as it is, is by no means the whole. The insane in the asylums probably form only a comparatively small proportion of the aggregate of those persons suffering from mental alienation in some form or other. The "crazy circle," as Dr. Browne terms it, he estimates roughly to possibly number twice as many as the persons who form the total of those confined in asylums, public and private. If, in addition to these large numbers, we take into account the numbers of those who suffer from epilepsy and paralysis, locomotor ataxia, and every sort of spinal mischief, neuralgia, hysteria, chorea, and the whole order of nervous diseases, which contributed among them 70,000 deaths to the returns of the Registrar-General last year, we shall have a grand total which may well fill us with dismay.

As to the interesting question of the causes of the disturbances of nervous equilibrium, called insanity, craziness, or neurosis, the address sums them up under the masterly headings of (1) the increasing complexity of the nervous system, and (2) the increasing complexity of life. The Commissioners in Lunacy give different causes; as, for instance, "mental worry," "pecuniary embarrassment," "alcoholism," "heredity," and so on; but these specific causes may easily be referred to one or both of the divisions first named. There can be no doubt that the rate at which life to-day is lived makes it impossible to maintain the calm and quiet of our ancestors. The increase of town life, with its infinite variety of change and whirl; the competition which there waxes keener and keener; the invention and use of machinery in an ever increasing number of occupations of life; the use of railways and telegraphs in place of quiet easy-going stage-coaches and franked epistles; with, let it be added, the anxiety that comes of not knowing intimately our buslness clients, and the consequent uncertainty whether they will meet the liabilities they have undertaken—these are some of the disturbing causes which go to interfere with mental and nervous equilibrium. All the excitement incident to such a mode of life induces a greater complexity of the nervous system. *The cerebral tissue becomes more and more highly organised, convolutions obtain secondary gyri, and, with each differentiation in structure, new possibilities of disturbances are introduced;* while the very differentiation in question produces in turn new mechanical devices, which again introduce a more complicated mode of life with which the nervous system must keep pace. It is somewhat discouraging to be told that education itself may be one of the causes of the increase of nervous disorder; but it is well to know the truth even when it is not agreeable to us. Even if Dr. Freichler's diatribe be not made out completely, there can be no doubt that stupidity may be artificially induced by unintelligent and injudicious teaching in school; and we take it that Dr. Browne's sugges tions on this head are at once the ablest and most instructive part of his address. Having shown, by examples, that the cerebral centres, if never properly exercised, are not developed, but that, if once developed, they do not waste, he goes on to use these facts as hints to training the young. Muscular exercise, he says, has been hitherto thought to expand the lungs, quicken the circulation, and brace the nerves; but to this must now be added the pregnant idea that it also contributes to the brain-growth and mental evolution. As a large part of the brain is composed of motor centres, we may, in the nascent state of the organ, powerfully act on the brain, by putting into methodical exercise the muscles which we know to be directed by its various parts; and especially the centres governing the movements of the hand ought to be brought into training by careful drill of manual movements, so that, in due time, a cunning right hand may be the servant of every man to some mechanical art, and of every woman to some technical work. If art be introduced into the nursery, so that the earliest recollections of after-life be those of beautiful objects, and if moral and religious feeling be duly cultivated, we shall be the better able to resist the inroads of nervous and mental disease; and thus, by a painstaking yet easy use of the powers with which we have been endowed, be of some use in our day and generation.

Ou the Use of Olive Oil in Large Doses for Softening and Causing the Easy Expulsion of Biliary Calculi. By RODERICK KENNEDY, M. D., Queen's College, Kingston, Canada.

It is scarcely a matter of doubt that the means resorted to for solution and expulsion of biliary calculi have hitherto proved slow and uncertain in their operation. Systematic writers, as a rule, do not attach a great deal of weight to the value of the so-called solvents. Not a few incline to the view that remedies of this kind are practically all but inert. Others assert in plain terms that medicines having these powers do not exist: Chloroform alone, or with ether, in the hands of some, is said to have removed these bodies, but this mode does not seem to have come into general use, probably because it requires time, and the proof of success is inferential. A simple medicine, readily available in practice, and having the power of softening and expelling biliary calculi, it will be admitted has hitherto been a desideratum. Such a medicine I have, during the past year, used in a variety of cases, and, I am happy to say, always with complete success. In every instance in which the calculi were proved, or presumed, to have been the cause of periodic suffering, these bodies were promptly and painlessly expelled in larger or smaller numbers by the use of *large* doses of olive oil. In some instances lately, where the patients did not exhibit symptoms of such acute suffering as are more commonly witnessed, but where obstruction to proper flow of bile was evident, I had recourse to this remedy, and in these cases also have been rewarded with similar surprising and satisfactory results.

A brief notice of a few cases illustrating the effects of the means used may prove to be not without interest.

Robert C——, of Adolphustown, an elderly farmer, had for some years been subject to hepatic disorder, attended with the occasional passing of gall-stones. The intervals between the passing of the bodies had gradually become more brief, and lately the paroxysms, always characterised by intense suffering, had come on at intervals of about a week with great regularity. I found the patient anæmic, sallow, and very much exhausted. The usual remedies for the gradual solution of the stones had been tried, but radical relief not being obtained, mitigation of the intense suffering was what, previous to my being sent for, had been principally aimed at. I ordered six ounces of the oil to be taken at bedtime, to be followed in the morning by a full dose of castor oil. No motion of the bowels was obtained till next evening, after the administration of an enema. Twelve hours after taking the oil, the patient began to complain of a good deal of nausea and faintness, and for several hours there was considerable restlessness, and constant apprehension that the usual paroxysm was about to come on, but no acute pain. In the evening the enema was followed by several copious motions, each containing numbers of softened gall-stones, amounting in all to not fewer than two hundred, varying as to size from a large hickory nut to a small pea, of a pale yellowish-green color, semi-transparent, soft, easily broken up, and of a great variety of shapes. The patient had a good night's rest, and expressed himself in the morning as feeling very much better, and enjoyed a light breakfast. After the lapse of two days, the paroxysms threatened to return, I ordered the oil to be repeated two nights in succession. The expulsion of a quantity of slimy bilious-looking matter followed, but no more calculi. The calculi had evidently become dissolved. The patient was left with directions to repeat the use of the oil a few times, at intervals of two or three weeks, and after this as might be indicated by the recurrence of symptoms threatening the return of the paroxysms. I saw the patient five months after my first visit. While there were indications of organic disease of the liver, no more calculi had been passed, and the paroxysms ceased to return.

Mrs. W. F——, of Ernestown, presented a case very similar to that of C——. She had for some years suffered from fits of intense pain, generally coming on after a hearty meal. She was directed to take full doses of the oil for two consecutive days. She passed about two hundred calculi, varying in size from a grain of wheat to a filbert. The periodic attacks of pain ceased with the removal of the gall-stones.

Gabriel B—— and Clinton F——, both of this township, each presented a case of hepatic disease, characterized by obstruction to the flow of bile, accompanied by severe pain. The oil was administered with the effect of removing softened calculi of considerable size, but in smaller numbers than in the preceding cases, the general symptoms being relieved. A number of other cases might be referred to, in all of which the power of the oil to soften and facilitate the expulsion of biliary calculi was shown to be prompt and unequivocal.

The material point which may be deduced from these cases is, that olive oil, administered in repeated *large* doses, seems to have an unquestionable power of so softening and partially dissolving biliary concretions as to render their expulsion comparatively easy.

Another fact I have noticed is, that although the administration of the oil at intervals of a few weeks or months does prevent the re-formation of the concretion for the time, yet the resort to the oil alone does not alter the causes or diathesis upon which the formation of these bodies depends.

NOTE.—Readers will please give this treatment a fair trial and report the results.

ABSTRACTS.

"Qui e nuce nucleum esse vult, frangit nucem."

The Temperature of Rheumatic Fever and the Treatment of Cerebral Rheumatism by Cold Baths. By DR. M. RAYNAUD.

Dr. Raynaud has found that the use of cold baths has resulted in the absence of pains in the joints, and all tendency to visceral fluxions. The possibility of great fluxionary movements on the part of splachnic organs does not appear to him to be a contra-indication for the use of cold baths. He then examines the question of the temperature requiring the use of cold baths. Temperature alone is insufficient to establish a general rule for therapeusis, and it would be very imprudent not to heed other grave complications. The word hyperthermic should not be too strictly interpreted,for the tolerance of fever varies with the individual. Every day, patients are seen who manifest delirium after a slight degree of fever, while others remain calm with an intense fever. Diseases often modify markedly this individual tolerance of high temperatures. In typhoid fever, for example, a patient may endure with impunity, provided there is a morning remission, temperature of between 104° and 109°.

In an abnormal case of scarlatina in a child, the temperature rose to 111°, lasting however, but a single night, the patient ultimately recovering. This is not, however, the case in cerebral rheumatism, and in a general way it may be said that rheumatic fever oscillates between 100° and 102°, presenting from time to time exacerbations, but a temperature of 105° in cerebral rheumatism is of very grave import. At Lareboisiere Hospital a girl was admitted who had a temperature of 103° unaccompanied with other somatic phenomena of rheumatism, but complicated with great delirium. This case recovered by the use of the cold bath. A child, thirteen years of age, presented the same temperature the third day, after which rachialgia came on, followed by a loquacious delirium, tumefaction of many joints, coma, and death on the fourth day. The patient might have been saved by the use of cold bath. Mr. Sevestre, however, recently reported a case of cerebral rheumatism in which the highest temperature reached was 98½°. Temperature therefore is not the only indication for the use of cold baths.

Under the influence of cold baths the disease is somewhat prolonged, but ceases to resemble rheumatism, especially as regards the articular affections which disappear altogether. As to rheumatic fever so well described by Bouillaud, it may well be asked whether this does not approximate in character the fever from traumatism, as it is common to find rheumatism complicated by a cardiac affection with a but slightly elevated temperature, and not unfrequently does it happen that the appearance of pericarditis in the course of rheumatism occurs simultaneously with a slight lowering in temperature. In exceptional cases fever is the only manifestation of the rheumatism. Although the Doctor is not prepared to admit an alteration of the blood, he believes that rheumatism affects the vascular system, more particularly the internal coat of the arteries and the lining membrane of the kidneys. Dr. Raynaud here cites a case that made its appearance at the Lareboisiere Hospital. A woman, twenty-one years of age, was admitted to that institution in 1873. Five years before she had been treated there for an acute rheumatism whose progress had presented nothing abnormal: when she quitted the hospital her heart was healthy; five weeks later, subsequent to the arrival and maintainance of normal temperature there was an aortic insufficiency. In 1873 she was attacked by a febrile affection which was at first taken for typhoid, but showed its true nature by rheumatic swellings of the joints. This patient complained of neuralgia which skipped from one nerve to another, the patient dying finally of hemiplegia. In conclusion, Dr. Raynaud claims that cold baths cause cerebral rheumatism to assume an articular type; that cerebral rheumatism is an ataxic rheumatic fever; finally that hyperthermic phenomena in cerebral rheumatism are indications for cold baths.—*Le Progres Medicale.*

Pilocarpine in Obstetrics. By DR. HYERNAUX.

It has been recently asserted that pilocarpine possesses ecbolic qualities, and to determine the question Dr. Hyernaux instituted a number of researches on the subject simply for the purpose of determining the exact truth of the question, and cites a number of cases in which pilocarpine has been given with beneficial results as regards eclampsia, but without any effect as an oxytoxic, although the patient aborted subsequently from fright. Pasqualis' experiments, quoted by the author as performed in seven cases, showed that in these cases pilocarpine was without effect as an oxytoxic. Schulen also has reported several cases without result as to effect in producing premature labor. Dr. Welponer, assistant to Braun's clinic, has had the same result in his experiments.

The author concludes as follows:

Firstly. That pilocarpine is not an agent specifically oxytoxic.

Secondly. That it appears to be more dangerous for the mother than for the child.

Thirdly. That even were the facts demonstrable which seem to attribute to it an oxytoxic value, it would be wiser practice in obstetrics to use in preference procedures recognized as more certain and less disturbing to the organism, and which can never, like this alkaloid, cause death either by an asphyxic congestion of the lungs, or by an arrest of the movements of the heart after stimulating them beyond measure. "It would be wrong, says Prof. Heger, to consider an injection of pilocarpine as inoffensive, for this article exercises a marked influence on the nerves of the heart, and syncopic, or asphyxic phenomena may readily result from its use."

"My experience, writes Dr. Welponer, speaks strongly against the ecbolic value arbitrarily attributed to pilocarpine, and in consequence I believe the positive results said to be obtained can be regarded in no other light than an illusion easily explicable as resulting from the complicating factors that enter into this problem; as for myself, I do not hesitate to regard the question as settled."—*Bulletin de l'Academie Royale de Medecine Belgique, Tome XIV., No* 9, 1880.

The Influence of Phthisis on Menstruation. By DR. G. DAREMBERG.

For a long time Dr. Daremberg had been impressed by reading in a work on diseases of the chest by Walsh that in Great Britain the mortality from phthisis was three per cent. greater among women than men, and during his residence at Mentone his attention was attracted by the irregular course of this disease among females, and from this he was lead to study the influence of menstruation on this disease, and has arrived at the following conclusions: In the female whose menses are regular, menstruation is occasionally the cause of the development of phthisis even in those in whom the disease is not latent.

Under the same conditions when phthisis is established, the menstrual function may be the source of local pulmonary exudations either, simple, congestive, hæmorrhagic, or inflammatory, whether around lesions already existing,or in points wholly free from disease.

When at the time of the menses the flow fails to appear, although the other symptoms of menstruation are present, the menstrual congestions are much more intense and dangerous. If the menstrual flow persists after ovulation is complete, it becomes a case of anæmia without producing reflex congestion.

When the uterine or ovarian functions are suppressed at the menopause, pathological, or physiological, the menstrual congestions are not to be dreaded.

After pregnancy the phenomena of pulmonary congestion are increased.

The sudden stoppage of the menses does not give rise to phthisis except in females predisposed to that disease. From these conclusions result the following therapeutic indication: That in all phthisical females the lungs should be carefully watched during the menstrual period. At the slightest alarm from this cause the nervous excitement should be calmed by the moderate use of digitalis, bromide of potassium, or sulphate of quinine, according to the indications, and the pulmonary lesions acted on by energetic revulsions (vesication, croton oil, etc.,) for several consecutive periods.

When in phthisical women, either at the menstrual period or at the critical time of the menopause, the flow ceases without disappearance of the ovarian excitement, the attempt should be made to bring on the menses by external methods, revulsions to the lower extremities (sinapisms, leeches, etc.,) but if these fail, the moderate use of purgatives and emmenagogues (of general stimulants like alcohol, ammonia acetate; local excitants like rue, sabine, aloes, uva ursi, apiol ergot, borax; tonics like strychnine and quinine) should be tried, which even if they fail to bring on the menses, will produce the necessary revulsion.

In case the menstrual flow persists after ovulation has ceased, an attempt should be made, with great prudence, to diminish this flow, as an abrupt checking might be dangerous.

After the confinement of phthisical females,the amount of blood lost should be diminished as much as possible.

When uterine and ovarian menstruation has completely disappeared all attempts to bring it on should be checked as leading to anæmia.

When after a long discontinuance the menses again appear without a marked improvement having occurred a guarded prognosis should be given, this condition being often the precussion of more complications.—[*Archives Générales de Médecine.*

Internal Urethrotomy. By DR. DELEFOSSE.

After passing in review the operative procedures, the indications, and the results, ofinternal urethrotomy, Dr. Delefosse arrives at the following conclusions:

Firstly, Internal urethrotomy ought not to be regarded as a preliminary operation opening the door to dilatation, but on the contrary as an operation having its place in surgery, of which dilatation is not the corollary.

Secondly, Urethrotomy is not to be regarded as mere chance work, but requires as much precaution as the ligature of an artery. All instruments whose value in dividing the stricture, and that only, is not decided, should be rejected.

These conditions are best filled by the use of an olive urethrotome operating from before backward than with a narrow urethrotome operating from behind forwards.

Internal urethrotomy ought to be used in the greater number of cases where temporary or permanent dilatation can not be accomplished.

In case of contra-indication of internal urethrotomy, external urethrotomy only should be used, the other modes of treatment requiring violence. —*Archives Générales de Médecine.*

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ABSCESS OF THE LIVER.—Dr. W. A. Hammond, of this city, has aspirated the liver successfully for abscess fifteen times.—ED.

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ADDISON'S DISEASE. *A Clinical Lecture.* By WM. PEPPER, M. D., Professor of Clinical Medicine in the Medical Department of the University of Pennsylvania.

This patient is fifty years of age and follows the sea. Both of his parents are dead. His father died twenty years ago. The man has been a sailor since he was eighteen. Ten years ago, while on a voyage, he had a severe attack of scurvy, lasting ten months. He recovered entirely from that attack, but has suffered much of late years from sore throat, in the shape of ulcers on the pharynx. He has never had any venereal disease. On one occasion he had a fall from the rigging of his ship to the deck, which rendered him momentarily senseless and produced a round indented fracture of the table of the skull. During the winters of 1875 and 1876 he was exposed to very severe weather, and was in the habit of going about without a hat. Last winter and spring he complained of constant flatulence and nausea, with loss of appetite; he did not, however, give up work entirely until last August. Lately he has suffered from shortness of breath and some palpitation, with occasional spells of vomiting. Only last week he had a severe attack of vomiting, accompanied by a pulse of 130° and upwards, the most excessive muscular debility and emaciation. The attacks lasted only three or four days, and in that short time he lost fifteen pounds in weight. It occurred without any warning and without any irregularity of the bowels. (Strange to say, very soon after the most violent nausea and vomiting, he has the appetite for, and will eat, a hearty meal, with but slight indigestion.) His stomach is at times distended, and he feels a load and weight at the epigastrium. Up to the 24th of August last, he says, he usually had a fine, ruddy color; now there is very evident bronzing at certain points on his neck and forehead, and on the backs of his hands. This could not be the effect of the sun, for he has not been outside of the hospital, except for an hour or so each day, since August. The discoloration is becoming more and more marked. The gastric symptoms, which have been violent and irregular, are hard to explain on general principles, for he has never been addicted to the use of articles which cause indigestion; has never used alcohol nor tobacco. Again, the symptoms have not at any time been those of chronic disease of the stomach—such as cancer, or ulcer. Careful examination has shown me that there is no obstruction of the pyloric orifice by cancer, and no fibroid thickening there. There is no history of constant lancinating pains, and local tenderness upon pressure, which are among the usual symptoms of cancer, or ulcer of the stomach. There has been no blood mixed with the vomited matters. There is no enlargement of the spleen. There is no jaundice, and no bile in the urine. The stools have always been of the normal color. Apparently, there is no hepatic disease. In some diseases of the liver there may be found a dark discoloration of the skin, but in that case the pigment is uniformly deposited over the whole surface of the body, while here it is only found in particular spots.

In chronic malarial poisoning the general health is much broken down; there is dyspepsia, slight palpitation, and some deposition of pigment in the skin. Here there has been no malarial history, no enlargement of the spleen nor liver, and examination with the microscope has failed to reveal any pigment circulating in the blood; moreover, the patient has spent his whole life on the sea, where such a thing as malaria is almost unheard of. The lungs are healthy, and there is no heart disease. The urine has been examined and found normal. The characteristic, progressive failure of strength; the disposition to faintness and exhaustion; the palpitation and violent, causeless nausea, and vomiting; the steadily increasing deposit of pigment on certain exposed parts of the body; the entire absence of any cardiac, pulmonary, hepatic, splenic, renal, or gastric disease—all stamp the present case as indisputably one instance of that disorder known as Addison's Disease; an affection very rare in America.

As is well known, this disease is generally connected with a peculiar lesion of the supra-renal capsules, and has for its most marked external symptom a pronounced bronzing of the skin, which is quite constant, though not an invariable condition. The supra-renal capsules are small, triangularly shaped structures attached to the upper surface of the kidneys, but bearing no relation to them, and only known to us as ductless glands. They consist of an outer layer of yellow cells, or cortical substance (bound in by a strong fibrous capsule) surrounding a triangular space filled with dark red, pulpy tissue. They have no duct and no known function to perform in the animal economy. Their supplying arteries and veins are unusually large in calibre, and a very great number of minute nerve-fibres run to them from the solar plexus and semi-lunar ganglia. They have, in fact, a much richer supply of nerves than have the kidneys themselves. There have been numerous hypotheses as to their function, or functions. Some have supposed that, by reason of their immense supply of sympathetic nerve fibres, they have some vital connection with the sympathetic nervous system, while others have imagined them to be work-shops for the elaboration of the red corpuscles, or the pigment of the blood. But when, as in a number of cases in the lower animals, extirpation of them has been effected, no greater change has been noted in the composition of the blood, or in the general health, than might be expected to attend any other such serious operation. These little bodies may be the seat of tubercular deposits, of malignant disease, and of slow, fatty degeneration. In none of these diseases of the supra-renal bodies do we find the peculiar symptoms of the present case. Addison's Disease is a chronic inflammation of these ductless glands, which, in the course of the disorder, become enlarged to two or three times their natural size. If cut open in the early stages we find them a mass of thick, inflammatory growth, bound in by the tough, fibrous capsule. Later, this inflamed tissue passes successively through the stages of fatty and cheesy degeneration. If the disease reaches a still more advanced stage before death supervene, a dissection of one of the capsules will lay bare to us a mere fibrous sac, containing a puriform liquid, or, withered and puckered, its only contents a few gritty particles, the calcareous result of the cheesy degeneration. Cohnheim has noted in *Virchow's Archives*, the changes in the marrow of the bones in pernicious anæmia; but, as yet, no such lesions have been discovered in Addison's Disease, for the simple reason, possibly, that the marrow of the bones has not not yet been examined in those who have died of this disease.

The complaint which we are considering presents a number of different symptoms. In very few cases do we find all the various symptoms of the disorder combined. Generally, one or more particular sets of symptoms predominate to the exclusion of the rest. In the present instance, those which we notice most prominently are the violent nausea and vomiting, the gradual, increasing asthenia, the well-marked local bronzing, and the rapid loss of flesh during the acute attacks of gastric disturbance. The English authorities state as the result of their experience, that rapid, or even noticeable emaciation, is a very rare occurrence in the course of the disease. I have no doubt but this is very true in the vast majority of cases ; but in this case, and in a previous one which has come within my observation, the very opposite has been found to hold good. You have just heard how this man lost fifteen pounds of flesh in the course of three or four days. In the other instance there was steadily progressive emaciation from the first warning of the disease up to the hour of death.

As regards the failure in strength, this is generally the earliest and most characteristic symptom. It may come on very slowly, or so rapidly as to simulate an attack of typhoid fever. When the patient is quiet, he may feel quite strong and well, but the instant he makes any exertion he finds himself faint and as feeble as an infant. Usually, therefore, he shows an entire lack of energy, a perfect willingness to lie in bed day after day, and month after month. This extreme muscular debility is most irregular in its growth ; the patient is worse and then much better again—well enough to do a little work. The progressive discoloration of the skin is hard to explain. It is not to be confused with any other deposit of pigment. It is mainly a bronzing of the exposed parts of the body; the neck from the roots of the hair to the line of the collar ; the forehead, the backs of the hands and the forearms ; the small of the back ; the raphe of the belly; the axillary and popliteal spaces; the scrotum and perineum ; every spot where the skin is exposed to the air and sunlight, or where it is covered by the clothes, and the circulation of the part is rapid. Sometimes there is a bronzing of the mucous membrane, the lips, gums and tongue. There is none of this here. In some cases the whole body is discolored. This discoloration is peculiar in hue, like sunburn, or the mahogany tinge of the creole, malay, or mulatto. In this case it is more characteristic than usual : the edges are abrupt and do not shade off gradually. I have been able to notice the peculiar fact, spoken of by others, that the discoloration is deeper during the acute gastric attacks, and clears up as they pass off. The discoloration is the least constant and least characteristic of all the symptoms. There is pigment deposited on the cheeks and forehead in some uterine diseases. So too in pregnancy, chronic peritonitis and abscess, particularly in deep spinal abscess. How can this disease, centered in such comparatively unimportant structures, give rise to such various and grave symptoms ? I think I can give you a rational explanation. The asthenia may, I think, be attributed to the prolonged reflex irritation of the nerve centres; the frequent action of the heart, with small, feeble pulse, and the disposition to breathlessness, or even to syncope, upon exertion, may be referred to the implication of the pneumogastrics and phrenics, or to the irritation of the thoracic ganglia of the sympathetic ; the irritability of the stomach, with nausea and vomiting, and the occasional abdominal pain and diarrhœa, point to interference with the solar plexus and semi-lunar ganglia; and it is still further possible that the catarrhal inflammation of the mucous membrane of the stomach and intestines may depend upon disturbance of these same ganglia. The presence of the air and sunlight has something to do with the deposition of pigment. There is also an increased, normal tendency to pigmentation by the irritation of the nerves. The pigment is drawn to a part by anything that stimulates the circulation. The general symptoms are, also, no doubt, partly due to the progressive interference with the elaboration of the blood. In some cases there may be very marked leucæmia present. There is no alteration of the blood in this case. The only change noted is the abnormal inclination of the red blood discs to form long rouleaux. It must be remembered, also, that when bodies undergo caseous degeneration, they tend to infect the system. Their degeneration is usually attended by dyscrasia and the production of tuberculosis and anæmia. The course of this disease is generally from one to five years. The prognosis is grave. No cases taken at this stage have ever entirely recovered. The disease may, however, be temporarily checked. Sudden death from fatal syncope is frequent.

As regards treatment, rest is chiefly indicated, with good, hygienic influences and wholesome food. In some cases an exclusive milk diet does great good. The bowels and other excretions should be carefully attended to; no long journeys should be allowed. Among medicines, there is no specific. The system should be sustained upon arsenic, iron, and cod-liver oil. Counter irritation over the seat of disease may be useful in early stages, so too as regards faradization with mild currents.

On general principles, nitrate of silver and iodide of potassium should be administered. The former drug is of great use where there is irritability of the stomach and intestines. Where the vomiting is violent and otherwise uncontrollable, chlorodyne or temporary enemata may be used. Where there is palpitation and dyspnœa, digitalis is invaluable. The best forms of iron to be employed are the iodide and sesquichloride. A very good prescription is the following, recommended by Greenhow:

℞ Ferri Sesquichloridi,
Chloroform, - āā ♏xv–xx.
Glycerine, - - - fʒ ii.
M.

Sig.—Three times a day in water.

The preparation which I usually employ is dialyzed iron. Phosphorus by reason of its influence upon the elaboration of the blood, was formally employed in this disease, but I do not place much confidence in it. Alcohol should be given in small quantities and in whatever form is best assimilated by the stomach.

Mt. Sinai Hospital. Service of Dr. E. J. MESSEMER.

CASE I.—Ulceration of Tonsils and Uvula, followed by Adherence of Uvula to Right Tonsil. A. H. L., aged twenty-three, gives the following history:

For several years previous he had been more or less troubled about his throat, but all these symptoms ceased two years previous to coming under treatment, at which time he had been attacked by dysphagia, The history other than this was that of tonsillar and uvular ulceration. And on physical examination the following appearances were discvered: On close inspection, the pharynx being widely opened there are evidences of ulceration on both tonsils, they being also enlarged. The uvula is elongated, presents cicatrices of old ulcerations, and is firmly adherent to the posterior portion of the upper-third of the right tonsil. The patient gives no evidence of syphilis. Therapeusis was confined to the treatment of dyspeptic symptoms, which are present, and the use of local applications of warm water.

CASE II.—Sub-acute Laryngeal Catarrh. M. H., æt. 21, came under observation six months ago, and then had a husky, sibilant voice. She gave the following history: Three months previously she suddenly became hoarse and applied to a well-known laryngologist, who pronounced the disease paresis of the vocal cords, and made use of warm baths and electricity with no result. The patient then fell into the hands of a homœopath, and finally her money and patience being exhausted she applied to the hospital for treatment. Physical examination of the chest shows the thoracic viscera to be normal. On laryngoscopic examination, the epiglottis and ary-epiglottidean folds are slightly injected; the mucous membrane between the two arytenoid cartilages is much swollen and protrudes between the vocal cords, which are normal. The patient was ordered not to speak much, to sponge herself with cold water, to take a great deal of outdoor exercise, to keep her bowels open, beside which the following local applications were made. The throat was sponged with the following:

℞ Sodium Bicarb., - grs. v.
Aquæ, - - - - - ℥ i.

to dissolve the mucus from the membrane, and topical applications of the following:

℞ Argent Nitrat, - - - ℈ i.
Aquæ, - - - - - ℥ i.

were made every fifth day. After the

second of the topical applications was made the patient's voice had resumed its normal characters; the improvement was temporary, but the treatment being continued three weeks longer the patient fully recovered.

CASE III.—Paralysis of the Left Vocal Cords from Pressure on the Recurrent Laryngeal Nerve through Pleurisy. M. B., æt. 45, when coming under observation, gave the following history: Nine months previously she had been treated for pleurisy at Bellevue Hospital, and had fully recovered. During the last five months she had noticed a marked loss of tone in her voice, which became more and more marked. On physical examination slight dullness and pleuritic friction sounds were noticeable on the left side of the thorax. Laryngoscopic examination showed nothing abnormal in either the epiglottis or ary-epiglottidean folds, but on intonation of the vowel E, the vocal cord of the right side was noticed to come to the mesial plane, while that of the left side did not, it moving but very slightly. The patient was unable to move it any more than at first even on the greatest exertion. Treatment with tonics and topical applications, while restoring the patient's general health, have been without effect as regards the paralysis, which still persists.

CASE IV.—Ulceration of Pharynx and Abscess of the Pyriform Sinus caused by a Foreign Body. Patient æt. 30, came under treatment for a swelling over the right carotid and beneath the angle of the inferior maxillary bone, which was moved on the pulsation of the artery. The patient believed this swelling was due to enlarged glands and said that it had suppurated and been lanced by several physicians. On physical examination the chest was found normal; laryngoscopic examination showing a wide pharynx, the larynx appeared to be pushed to one side, the pyriform sinus was the seat of much suppuration. The whole of the epiglottis and ary-epiglottidean folds on the right side were swollen, thickened and injected. These were brushed out and touched with nitrate of silver, thirty grains to the ounce, which treatment was continued for one week without result. A new abscess was then discovered on the right side, and on manual exploration a sharp substance was felt in its centre, which was at first thought to be cartilage, but gave a rather unusual sensation for that substance. On the following day the examination was repeated and the abscess was opened by Turk's knife, giving vent to considerable sanguino-pus. The patient was ordered warm drinks for the two following days. Laryngoscopic examination on the third day showed the presence of dark substance, apparently a membrane in the right pyriform sinus. An attempt was made to remove this, but it was found firmly adherent and of an unexpectedly pointed character, giving to the forceps a sensation of hardness. The next day this substance was scraped, the patient gagged slightly, coughing and ejecting a dark substance enveloped in pus, which on washing proved to be the eye and bottom plate of a *brass button*, about half an inch long by a quarter wide. An abscess which had meanwhile pointed externally was opened and gave vent to a great quantity of pus; the abscesses external and internally were washed out for a month with sulphate of copper and carbolic acid, two grains to the ounce, the patient finally recovering three weeks after treatment.

SERVICE OF DR. M. J. B. MESSEMER.

CASE I.—Sub-Acute Laryngitis.—C.

S. K. presented himself in October, 1879, suffering from great hoarseness which he said had troubled him for more than a month. He could hardly speak above a whisper. There was a dry, hoarse, short cough which came on at intervals of every two or three minutes. Percussion of the chest revealed nothing, and auscultation failed to disclose anything abnormal. On introducing the laryngoscopic mirror into the throat the vocal chords were found to be glued together by a thick tenacious mucus which irritated the larynx, and which the patient vainly was endeavoring to cough up. He was ordered

℞	Ol. Terebinth., - -	♏x.
	Syr. Simplex, - - -	℥ ss.
	Aquæ, - - - - - -	℥ xxi.

M. And inhale the steam thereof for two hours every night before retiring.

He returned four days later greatly improved. The cough was almost entirely gone, but there was still a slight huskiness of the voice left. Ordered him to continue same treatment. He returned three days after entirely well.

CASE II. — Syphilitic Laryngitis.— Charles W. came under observation July, 1880, complaining of pain in the larynx. He could not speak above a hoarse whisper. He had been in that condition for two weeks. On questioning him it was learned that he had been attacked with a true hard chancre three years before. On the introduction of the laryngoscopic mirror there was discovered that the fauces were considerably reddened and inflamed. Small papillæ covered the pharynx and a lump of hardened tenacious mucus was fastened to the back part of the uvula. The vocal chords were considerably ulcerated and covered with mucus. He was ordered

℞	Hydrarg Biniod, -	grs. ii.
	Pot. Iod., - - - -	ʒ ii.
	Extr. Fl. Sarsaparillæ, ad	℥ ii.

Of which mixture a teaspoonful was to be taken three times a day after meals. In addition thereto he was directed to add a tablespoonful of simple syrup to a quart of water and inhale the steam thereof an hour before retiring. He was also cautioned not to speak much.

Six days later he returned and reported that the pain in the larynx had left. He could speak loud without any effort, but on using the voice much there was still some huskiness. He was ordered to continue treatment. Six days after he returned well. He was then ordered :

℞	Potassium Iodide, -	ʒ iss.
	Aquæ, - - - - - -	℥ ii.

Teaspoonful thrice daily for a year. In October he returned suffering as at first, and was ordered same treatment. He was well in four days. Ordered him to take small doses of iodide of potassium daily for a year, which he did, and has since been well.

Pulmonary and Pleural Hæmorrhages in Cirrhosis of the Liver. By DR. L. GAILLARD. *(Union Medicale).*

The least common of the haemorrhages complicating cirrhosis of the liver are those having their origin in the respiratory organs. Frerichs, to cite one of the best authorities, has shown that the most frequent haemorrhages occur in the stomach and intestines by reason of mechanical causes, but he adds it may be seen that these causes do not play this part in the skin, the nasal and buccal mucous, and the interior of the serous membranes, the meninges or in the parenchyma of the lung. M. Rendu in his remarkable article in the Encyclopedic Dictionary, closes his list of haemorrhage from cirrhosis by citing hæmoptysis which is he adds exclusively rare. What has been said about pulmonary apoplexy may be repeated concerning the exudation of blood into the serous membranes and a search of monographs or classical treatises is sufficient to lead to a belief in its rarity.

Chance has enabled us at long intervals to observe both classes of hemorrhages, in two cases of cirrhosis and these have seemed of interest as one had for origin the parenchyma of the lung and the other the pleuræ, and which arising without the means of mechanical phenomena, belong to the category of dyscrasias produced by hepatic cirrhosis. We will discuss these in two distinct chapters.

I. *Pulmonary Hæmorrhage.*—Medical literature does not abound in facts of this nature. In an observation cited by Frerich's, old pulmonary tuberculosis, was recognized at the autopsy to which the complication, we are at present interested in, might be logically attributed, and which, therefore, is not so valuable.

Murchison* has reported hæmoptysis and hæmatemesis in the last stages of hepatic cirrhosis.

Hayem† has communicated to the Anatomical Society a case of hæmoptysis accompanied by intestinal hæmorrhage in a man thirty-six years of age suffering from the last stages of cirrhosis.

Ollivier‡ cites a similar case, the hæmoptysis he says, has a predominating hæmorrhagic character. The most important hæmorrhage occurred at an advanced stage of the disease after an acute attack of fever, later on there was only a little intestinal hæmorrhage.

The most remarkable observation is that of Jaccoud §; here it was not at the last stages of the disease that hæmoptysis came on, but it was an early symptom. The patient, a woman forty years of age following the suppression of the menses had, every month for over a year, hæmoptysis which was regarded by Jaccoud as supplementary menstruation. The hæmoptysis was replaced by intermittent hæmaturia after which all hæmorrhagic symptoms disappeared, and the symptoms of ascites made their appearance, and at the autopsy well marked sclerosis of the liver was found.

In the case we are about to report, it was at the later stages that hæmorrhage came on to accelerate the fatal termination. The other hæmorrhages were not present. It is difficult to say why the respiratory organs should have this tendency. Perhaps the bronchitis existing at the time of his entrance into the hospital caused the predilection, but there was no other pulmonary lesion and, as the autopsy demonstrated, no tuberculosis.

Cirrhosis of the Liver—Repeated Hæmoptysis and Death.—E. J., market-butcher, entered the St. Louis Hospital in the service of Dr. Guibout, St. Charles, Ward 58, September 17th, 1879. His pathological antecedents were bad. He was such a hard drinker as to acquire quite an amount of reputation among his comrades and had been attacked by syphilis of which he carried the characteristic scars on his legs. In 1878 he was treated at the Hotel Dieu for an icterus and recovered, but he had since that time had gastric troubles and difficult digestion, little by little the abdomen assumed a balloon shape and the lower extremities became the seat of an extended infiltration. Besides œdema of the legs there was a deep ulcer on the right thigh very similar to luetic ulcers which secreted much pus and appeared likely to invade the neighboring parts. No icterus but an earthy tint of the integument chronic laryngitis with troubles in phonation, and cough, followed by a mucous expectoration. Nausea and dyspepsia with frequent watery or alimentary vomiting and intermittent diarrhœa. The urine was red, slightly charged with urates, but did not contain albumen. No hæmorrhoids or venous dilatation perceptible on the abdomen. Dr. Guibout diagnosed the the case as hepatic cirrhosis due to alcoholism, complicated, perhaps, by syphilis and ordered iodide of potassium.

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* Clinical lectures on diseases of the liver, 1868.
† Societé Anatomique, 1869.
‡ Thesed' Ahmed amzi, 1874.
§ Chlinque de Lariboisiere, 1867.

September 24th.—The abdomen continues to become more balloon shaped. Dyspepsia, bronchitis, frequent coughing, and spitting.

September 26th.—During the night the patient had great dyspnœa followed by a paroxysm of coughing after which he expectorated a great deal of blood. He was ordered leeches to the abdomen, ice and perchloride of iron.

September 27th.—Excessive feebleness and pallor. During the day the coughing leads to further expectoration of blood mixed with bronchial mucus. On auscultation crepitant ralês were heard at the base of both lungs; he now ordered counter-irritation and opium.

September 30th.—Stronger but the face is pale and extremities cold. Constant somnolence with dreamy delirium; tongue dry, more coughing but no hæmoptysis,

October 3d.—A fresh attack of hæmoptysis came on, the patient was very delirious.

October 7th.—The patient became unconscious and motionless on his bed with eyelids closed, pupils dilated and having a stertorous respiration. Retention of urine requiring catheter together with rectal incontinence was present. The patient was treated energetically without result, dying two hours after.

Autopsy.—On opening the abdomen a great quantity of serous liquid was evacuated. The intestinal glands were dilated. No peritonitis, no hæmorrhage into the peritoneum. Gastric and intestinal mucous membrane congested but no evidence of hæmorrhage present. The kidneys were also injected. Spleen much enlarged and indurated containing a fibrous mass about the size of a half dime. The liver presented the characteristic lesions of cirrhosis. It was decreased in size, of a pale yellow tint, irregularly contracted, its tissue being hard and resistant under the scalpel. The gall bladder was normal. Histological examination showed thickening and increase of connective tissue cells.

The heart was in a state of fatty degeneration, but presented no valvular lesions. Recent fibrinous clots were found in the right ventricle.

The left lung was the seat of the most remarkable alterations. Its lower lobe was adherent to the costal parieties behind. At this point the lung tissue was black, infiltrated with hardened blood, did not crepitate on pressure, sank to the bottom on being thrown into water, and was very friable. There were desseminated apoplectic spots with rupture of the alveolar vessels in parts of the upper lobe. The rest of the organ had a blackish parenchyma but normal crepitation. The lower lobe of the right lung presented apoplectic extravasations and the other lobes were the seat of intense congestion. No evidence of tubercle or inflammation was found on histological examination. Intense congestion of the cerebral meninges, but no cerebral hæmorrhage.

II. *Pleural Hæmorrhage.*—Pleurisy

and more particularily pleurisy of the right side is frequently met with in cirrhosis of the liver, co-existing with more or less serous effusion, the liquid sometimes becoming slightly sanguinolent but it is exceptional to find at the autopsy hæmorrhagic pachy-pleuritis.

Moutard-Martin* has cited a few cases of this kind, and Martineau,† on practicing thoracentesis, once drew a large quantity of bloody serous liquid from the pleural cavity of a patient regarded as a case of cirrhosis. Moreau‡ gives a case ascribed by him to cirrhosis which appears to admit of doubt, judging it from an etiological standpoint. It was a case of hæmorrhagic pleurisy with co-existent pneumonia of the base of both lungs. The liver was adherent to the diaphragm and offered a remarkable friability to the finger plunged in the hepatic tissue.

The organ thus described can scarcely be said to be cirrhotic, and charged with being the source of the pulmonary accidents.

Marguerite,§ found in a case of hepatic cirrhosis a slightly sanguinolent pleural effusion, both lungs being free from adhesions. He had obtained by aspiration during life a similar liquid. The most significant and interesting case from the present point of view is one reported by Laennec.‖ A patient forty-six years of age entered the Neckar Hospital with œdema of the lower extremities and thoracic symptoms which led to the diagnosis of partly cured left pleurisy with (perhaps) tuberculosis, which later on was modified into *chronic* left pleurisy with pulmonary catarrh. At the autopsy two pints of bloody serum were found in the pleural cavity. The internal surface of the pleura was covered with a false membrane of a very vivid scarlet color from which hung many delicate flakes of exudation of a rose red color. The liver presented the usual appearance of cirrhosis.

The patient coming under our observation presented like Laennec's the apparent symptoms of pulmonary tuberculosis and gave the following history:

Right pleurisy regarded as tuberculozis. Sudden death. Hæmatoma of the pleura, with hepatic cirrhosis.—C. D., Cooper, 53 years old, entered the service of Dr. Hayem in the Saint Anthony Hospital, March, 1880. The patient had been a great drinker, and during the month of December, 1879, had grown progressively thinner, suffering-ing constantly from chronic laryngitis and expectorating much mucus.

March 16—He experienced a chill after exposure, followed by fever and lumbago, for which he was treated by a physician with purgatives. His stools have always been regular and he has only a slight dyspepsia. The patient is a pale, thin, middle-sized man. His tongue is dry, his lips violet, he has slight dyspnœa and a dry cough, but no expectoration, and complains of pain on the right side. On examining the chest there is found in front, on the right side, beneath the clavicle, a Skodic bruit; in the lower half, friction sounds and dullness. Behind there is dullness; at the end of the lower half absence of respiratory vibration and vesicular murmur. Slight sibilation in the middle portion. Respiration normal on the left side. Heart normal. Urine charged with urates. Right pleurisy was therefore present which Dr. Hayem regarded as due to an oncoming tuberculosis. Counter irritation, kermes mineral, digitalis and opium were ordered.

March 27th.—No new phenomena

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* Hæmorrhagic pleuritis, Paris, 1878.

† Memoires of the Hospital Medical Society, 1874.

‡ Gazette des Hospitaux, 1864.

§ Thése de de Paris. 1862.

‖ Traité de l'auscultation, 1879.

except night sweats, no œdema, no ascites.

April 1st.—Exudation persists, slight fever, emaciation continues, slight diarrhœa.

April 4th.—More frequent cough, increased bronchial expectoration; slight increase of the exudation, not sufficient to warrant surgical interference. Morphine and quinine.

April 6th.—Some chills in the evening.

April 8th.—Patient while at stool died suddenly.

AUTOPSY. *Thorax.*—Right pleural cavity filled with bloody serum. Lung pushed toward the median line. There were flakes of bloody fibrin on the costal and pulmonary pluræ; the pleuræ bear traces of old pleurisy; no tubercles. Right lung flattened against the pericardium, is of a greenish hue, deprived of air and resembling india-rubber; no tubercles. Heart, right side empty; blackish clots in left ventricle. Larynx, traces of old chronic laryngitis. Digestive tract. Œsophagus normal; gastric mucous membrane slightly softened. Spleen enlarged and adherent to diaphragm. Liver much diminished in size, and showed on histological examination the usual cirrhotic changes.

From the progress of the disease and the autopsy, it is safe to conclude that the pleurisy at first serous, became hæmorrhagic later from the hæmorrhagic diathesis produced by the hepatic cirrhosis.

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MEDICAL SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

LATE MEETING OF THE NEW YORK SURGICAL SOCIETY. DR. H. B. SANDS, President.

Dr. Briddon presented a patient whose femoral arteries had both been ligated for aneurism.

Dr. Louis A. Stimson then read a papaper on "The Antiseptic Catgut Ligature," for which he claimed that the general impression was now favorable to the use of the catgut ligature and it was desirable to ascertain if these opinions were supported by facts. His examinations had been made both in a pathological and a clinical direction. The first standpoint was taken in order to show the relative success of the catgut as compared with a silk ligature, and the other to show the local effect of the catgut ligature on the vessel. Statistics were then given showing that the use of the catgut ligature had been followed by fewer secondary complications than the silk. He then referred to pathological details, claiming that the probability of secondary hæmorrhage was less because the occlusion was effected without complete division by a purely irritative tissue production. He then gave the following recapitulation: "Here are three arteries completely divided by a catgut ligature without suppuration. Two of them present an appearance which indicates that if the patient had survived they would have resembled the fourth in which the continuity of the artery is preserved. He held that the catgut ligature divides the artery completely. He regarded it as an important question whether the ligature should be tied with a sufficient force not only to arrest pulsation but to divide the inner and middle coats of the artery.

Dr. Erskine Mason cited a case in which Dr. Stephen Smith ligated the carotid artery with an antiseptic catgut ligature that was cast off as is an ordinary silk ligature.

Dr. R. F. Weir referred to the fact that he in the earlier days of antiseptic practice used to sew up wounds with catgut sutures in consequence of which he had seen the stumps gape in two days from the absorption of the sutures. He now frequently used the carbolized silk, although Lister, who advised it, was yet experimenting to secure gut that will last longer in a wound. With reference to phlebitis he had had a case in which he ligated the popliteal artery for hæmorrhage from a gunshot wound, ligaturing the artery above and below, and leaving the vein alone. Phlebitis came on and extended down the leg for some distance, though the wound was dressed antiseptically.

Dr. Briddon had observed that if a large vein is exposed in a wound to atmospheric air for a short time a thrombus forms in the vessel; this he had repeatedly noticed without other injury to the coats of the vessels than that occasioned by exposure.

Dr. Lange had observed that large veins in the neck had been exposed without the production of thrombi.

Dr. Weir claimed that acupuncture produced its effects through simple contact, without division, of the middle and internal coats.

Dr. Stimson said this only occurred after an amputation, when the coats of the artery were divided.

Dr. Hutchinson had experimented on sheep, and had succeeded in procuring occlusion of veins by simply placing the walls in apposition. He had never applied acupuncture to an undivided artery himself, and in one instance where it had been applied to his knowledge by Dr. Little, the occlusion was but temporary. When the artery was divided satisfactory results had followed.

Dr. Weir called attention to the superior quality of New York catgut to the imported, and especially to the E violin strings to be obtained at Sonntag's, 9 Park Place, or for smaller arteries or sutures from Keller, 64 Nassau Street.

The President remarked that the slight mortality of the cases mentioned by Dr. Stimson was encouraging, but the number of cases was too small to allow of the elimination ot elements of error. It would be interesting to ascertain the causes of success. Syme has tied the femoral thirty-three times successfully. His skill in operating was perhaps here one of the elements of success. The catgut ligature had no doubt been of value in Dr. Stimson's cases. In the three cases in which Dr. Sands had applied the catgut ligatures he had used the E violin strings recommended by Dr. Briddon and regarded them as the best catgut ligatures he had seen. It seemed to him that statistics were not necessary to prove the superiority of catgut over silk. A recent case where he ligated the cartotid showed the superiority of the catgut over silk, there being no ulceration and the cure complete. In two weeks he was able to detect the occluded artery as a fibrous cord, a result that had never happened to him with silk ligatures. He thought that the greatest success would be obtained by the discovery of an animal substance which would neither act as an irritant nor be absorbed.

Dr. Briddon had ligated the femoral artery fifteen times successfully. In ten operations he used the silk ligature, and it gave him a great deal of trouble. In five he used the antiseptic catgut ligature without any trouble at all.

The Society, after some general discussion, then adjourned.

MEETING OF THE NEW YORK NEUROLOGICAL SOCIETY, DR. T. A. MCBRIDE, President. January 5, 1881.

Dr. W. J. Morton presented a case showing the effect of *Magnets in the treatment of Hemiplegia.* The patient a woman twenty-two years old had an attack of cerebral hæmorrhage two years before leaving her with greatly impaired motility and almost complete loss of sensibility on the left side. The left arm and hand had become flexed and capable of but little motion. The toe dragged in walking and she could not put the heel on the ground. One magnet was applied on the leg over the stocking, and another on the upper arm. They were kept on for about an hour, the treatment not being epeated. The patient speedily felt return of sensibility and it was soon restored. Motion was improved by use of electricity but was not affected by the magnet.

Dr. Morton then read a paper on *Gheel and its Insane*, in which he gave an account of the family system of treating insanity, adopted there and discussed its main characteristics which he told were comparative freedom, occupation, and the family life, saying in conclusion that it was an ideal not admitting of full realization elsewhere, but that the essence of the idea, reasonable liberty, healthful and sufficient employment, and congenial surroundings, was repeatable though not in any of the great asylum buildings.

Dr. Spitzka then presented a case of *Cerebral Asymmetry in Monomania*, in a man, forty-five years of age, whose delusions had developed within the past few years. The cranium was decidedly asymmetrical and in the less developed side of the face were disturbances of motility. The point made was that the delusions and motor disturbances might lead to the idea that the case was one of paresis, but these were due to asymmetry, and the patient would never develope into a paretic.

The Society then adjourned.

CORRESPONDENCE.

"Sit mihi fas scribere audita."

Boston, Mass.,
December, 1880.

FOOD.

OPEN LETTER TO J. MARION SIMS, M. D., LL. D.

My Dear Doctor—One of your peers has said that food is an agent of tremendous power. In support of this opinion, I have only to refer to the fact that all organized beings in the animal and vegetable kingdoms exist by means of food. Not only the existence but the character of fauna and flora depends on the quality of food. Anything that sustains, nourishes and augments an organism is food. On this ground air is food. Dr. Tanner is popularly said to have lived on nothing but water for forty days. But without air he could not have lived four minutes. Hence we must conclude that an agent that acts twenty times a minute and 28,800 times a day and more in the life epoch of every civilized individual must be a cogent agent. One would think that man ought by this time to know all about it, but it is curious that intelligent human beings, and even educated physicians, take, in their estimates of food, only partial views, and govern their actions by these partial views. That is, food is judged more on æsthetic grounds than on any other. We find people asking, "Does food look nicely, smell goodly, taste goodly, affect the sense of hearing nicely, and touch rightly?" I have no quarrel with this mode of doing things; but as man is a recording animal, he has, in the passage of ages, accummulated histories that throw light on the subject of food from other stand-points of view. All I ask is to have such histories respected by man in the selection of food. I think the chemist, the physicist, the physiologist, the pathologist, and the therapeutist, should be consulted as well as the æsthetics of our senses.

The chemist can tell what elements are in food and what are in our bodies. The physicist can tell us how it happens that we are merely the exponents of the power in the sun, or how we become examples of the actual energy kinetic of the sun's potential kinetic energy stored up in the food we eat. The physiologist can tell us about the wonderful processes of digestion, and what food is assimilated in the best manner. The pathologist can tell us how food produces disease, and the nature of the disease. The therapeutist can tell us how food is a cure for disease. I am well aware that people generally overlook the dicta of the scientific men, but this is no good reason why their opinion should be crowded out of sight by the things that appeal to the beautiful in the sense of sight, taste, smell, touch and hearing.

But, my dear Doctor, you ask me to tell you something about food in a particular manner. I think you will see that the subject broadens out so much that a volume would be necessary to contain what might be written. I think, therefore, that perhaps if I call your attention to the aspects of food as a cause and cure of disease, I can more appropriately meet your wishes. Should you desire to read what I think of food as an anæsthetic, chemic, kinetic, physiologic, pathologic and therapeutic, you will find it in the *American Journal of the Dental Sciences*, January and February, 1880, Baltimore, Md. Before proceeding farther, I desire to acknowledge my indebtedness to Dr. James H. Salisbury, of Cleveland, Ohio, for his original and fruitful investigations in relation to food. He is my master.

FOOD IN HEALTH.

Prof. L. W. Mason, now at Tokio, engaged in introducing Western music into the Empire of Japan, said once to me, "If people would take as much pains with their own feeding as they do with their animals, there would be much less unhealthy feeding." Dr. Salisbury says that if we can find out what is the natural food of an animal, we can have healthy feeding. Give the animals a chance and they will only partake of their natural food and be healthy, other things being equal. It is very interesting to watch the process of eating in animals we call low in the scale of life. Take the Rotifers, for example. They vibrate their cilia with such force as to make a powerful current of water to flow towards them. Objects swimming in the water are thus drawn towards the mouth of the Rotifer. But the Rotifer does not take in everything that can get into its mouth, like a conduit, but every once in a while one sees the undesired object suddenly thrown out of the way on exactly the same principle that man rejects indigestible objects. Even the root-footed animals—rhizopods—that have only a body and legs, select their food; yet they don't seem to have special organs of sense. But they will take only their natural food, and if they don't get it, they don't thrive, as a general rule. The same is true as to plants, so that the possession of a high order of intellect, or even of any intellect at all, is not necessary to healthy feeding. We say that the plant or the animal instinctively feeds on its appropriate food, when it can be obtained. A healthy, whole body is the result as a general rule. I think, however, that the subject of instinct in relation to food needs a special treatment; but it is foreign to our subject here only to aver that if man would follow his instincts more in food, perhaps it would be better for him. Among savage races we find specimens of health, so much so that some people seem to think that they have no diseases at all, and even have perfectly normal parturition. But while it is true that savage races bear more severe strains on their systems than the civilized, still the testimony of travellers and others combine to show that savages are not exempt from diseases, and suffer accidents of parturition. The same is true of animals. But why should we regard it as forcing things to infer that the Creator made His creatures adapted to the different kinds of food He intended they should have. Do we not see in the bovines a wonderful digestive system exactly adapted to the digestion of vegetable food? Is not the common fowl provided with a digestive system which will easily appropriate the grains that would be almost indigestible to man? And so on. Dairymen, hostlers, and ladies know something about these facts, and successfully practice on them when they feed kine, horses and birds. But I never heard of any of the parties named feeding their charges on food simply because they thought it looked, tasted and smelt pleasantly to the animals named. To be sure, there is no doubt but that the animals named have their senses gratified by their food, for they evidence this in their acts. But the main aim of the keepers is health. Why, I ask, should not this be the end in the feeding of man?

But what is a healthy feeding for man? Upon this subject there are many opinions. Some maintain them with acrimony. Liebig, the great chemist, gave the world ideas on this subject; but I don't think any one eats on the plan of nitrogenous or non-nitrogenous. It seems as if the question turned on animal or vegetable food. There have been and are people that eschew animal food altogether. Some make it a matter of their religion to eat and not to eat certain foods. The Bible gives good authority for this way of estimating food. But after looking over the subject with some care, I follow the dicta of my master, and assent that two-thirds animal and one-third vegetable food is the healthy proportion of food for man, when he has arrived at adult life. I suppose not even the most ardent vegetarian would insist that milk from the mother's breast was not the natural aliment of a new-born babe. Our rule applies to the period subsequent to lactation. There are said to be examples of adults living on animal food. An informant tells me that in the recesses of Central America there have been individuals who lived to extreme old age—even to 150 years—on animal food exclusively. They had not their savage lives influenced by civilization. Sir Francis Head, in 1825, explored the pampas of South America. He was attracted by the diet of the herdmen—beef and water. Although he had his French *cuisine* with him, still he adopted the methods of the herdmen, and said he could not better express himself, in speaking of the results, than by saying he had a feeling of indescribable lightness, that he felt no exertion could kill him.

Why animal food two-thirds, vegetable food one-third, is the natural proportion, is as follows: 1. In the human adult in health there are thirty-two teeth. Twenty of them are for animal food, and the balance for vegetables, as indicated by their structure. Experience has proved it.

There are other reasons, but room forbids more in this division, save to remark in passing that savages and animals have a great advantage over civilized races in the fact that society does not make them use food which has been changed in its chemical proportions and characters, so as to conform to the so-called standards of æsthetics. For example, when the savage eats a grain of wheat, he gets all the gluten cells that God intended man should get when he eat wheat. The civilized man eats flour made from wheat—to be white in color there is the withdrawal of three-fourths of the gluten cells. So because society insists that bread, to be good, must be white, the civilized man loses three-fourths of the nerve food that the savage gets when he eats wheat. I regard this as an evil. But, supported as it is by a gigantic monetary and industrial interest, I think it will be a long time before it is abated. A history of the resistance to the efforts to correct this evil would be a convincing argument for those who believe in the depravity of mankind.

Starting, then, with this standard of two-thirds animal food and one-third vegetable, by bulk, we will now pass to the consideration briefly of some of the practical applications of our subject. For the fuller consideration, I respectfully refer your attention to a proposed work on food as a cause and cure of disease, by Dr. Salisbury and myself, ready for forthcoming when the times seem to demand it.

FOOD AS A CAUSE AND CURE OF CATARRH.

In 1858 I was much interested in this trite subject of catarrh. To aid me in my work I devised a laryngoscope, which was made by Mr. Alvan Clarke & Sons, the celebrated telescope makers. I mention this to show the degree of my interest. But it was not long before I found that no matter how good my instruments were, I could not cure catarrh by topical remedies, without I resorted to the powerful agency of food. Nasal catarrh is not a very good term, I think. It was coined at a time when laryngology was unknown. I am happy to say that at the present time efforts are being made to have a better nomenclature. But the conditions I mean were those that were caused by inflammations, ulcers, vices of secretion, adenoid hypertrophy, and an asthenic condition of the inside of the nose. I believe they are all diseases of weakness caused by mal-nutrition from faulty respiratory and stomachic food. Dr. Elsberg says that our topical applications to the parts affected are not directly curative of themselves. They, to use a vulgar phrase, kick up a row with the parts, and the hope of cure resides in the fact that nature, when the row is over, settles down into a healthy or peaceful condition. But the trouble I have found with these cases is, that the row I kicked up with my applications did not settle down into health. Sometimes it seemed to me like kicking a sick dog or a dead lion ; there was not life enough present to respond to the stimulus. But when I fed my patients on the Salisbury plan, and had infused new life into, them, then the stimulus acted like magic in the cure. Sometimes, with no topical applications more than half the cure could be effected. I remember a lady of middle age, who had a bad case of pharyngitis sicca. Her family attendant said it could not be cured. It was very interesting to see the moisture return on the polished membranes of the throat simply by food. Afterwards there were some spots of adenoid hypertrophy that yielded to topical applications of the persulphate of iron and glycerine equal parts. The fact was she had been living on starch and sugar mainly. She did not get force enough from her food to run the concern, so to speak. The moment her nerve centres were well fed by an abundant supply of nutritious food the moisture returned to the mucous membrane ? The throat is a part of the body that never can have a rest, like a broken limb, for example. Hence it is more liable to give out.

I do not wish to be understood as saying that I trace all throat affections to the want of the normal diet, but I do mean to say that I believe a great part of the present reputation of catarrh as incurable would be removed if man got his normal food.

FOOD A CAUSE AND CURE OF AGALAXIA OR WANT OF MILK.

In the *American Journal of Obstetrics*, April, 1878, I was permitted to present a paper on this aspect of the food question. I took there strongly the ground that nursing mothers could, other things being equal, obtain milk enough for lactation, if they would feed themselves as dairymen feed their cattle—in order to obtain a full dairy product. Since that time I have been confirmed in these views; and in the Virginia *Medical Monthly*, August, 1880, I reiterated my assertion. To show the strength of my position, I published the following case : A daughter of the Prof. Mason I have alluded to married and went to the State of Maine to live. She was about 24 years old, and weighed 96 pounds. In due time she was delivered of twins. As they were sons, the maternal grandfather was very anxious that they should derive their nourishment from their mother. This had been pronounced impossible by the old ladies and others of the neighborhood, who advised her not to attempt such a thing, as she would have to wean them in a short time, from the want of sufficient milk. It is confessed the ladies had good grounds for their opinions. The grandfather, having himself been a pretubercular case of consumption, cured by the Salisbury plan knew something about diet, and applied to me to know if she could not suckle the twins. I replied yes. "Well," said he, "make out a list of foods, and I will see that it is faithfully carried out."

The appended list was sent to her, in substance. At the age of six months the twins had had the full benefit of the plans. They had derived all their nourishment from their mother. One twin weighed seventeen pounds; the other weighed eighteen pounds, and the mother had gained ten pounds.

In another case, where a woman had her ninth child, and she went during and after pregnancy upon the diet, she had milk enough to suckle the child until it was 22 months old. Indeed, I have had no case, where the Salisbury plan was followed, but that had an abundance of the secretion of the mammary gland. Dr. Salisbury himself has finely worked up this subject, and in the proposed work on food it will be fully developed.

To my mind one of the greatest offences against a man is to deprive him of the normal supply of nourishment during infancy. It gives a bad start. He is shorn of his natural rights. I think it is the duty of all physicians to do what they can to have the rising generation enjoy their due supply of normal food. If there is a healthy, well-fed mother, I see no reason why they should cheat their offspring of their natural rights. And if the mother lives on the normal food, the act of giving nourishment by the breast is one of delight. The present abundance of nursing bottles and infants' foods in the drug stores is evidence of degeneration. If my experience is borne out in the history of other physicians, they are unnecessary evils. But in passing I may remark that my attention has been called to two cases where infants were given up to die after having used the common artificial foods, but were restored to health by the use of the Arlington, Mass., wheat in one case, and the flour of the entire wheat—Franklin Mills, Lockport, N. Y.—in the other; thus proving in these cases that the retention of the normal amount of the gluten cells in the flour gave nourishment to the infants where before it was denied. Shall our children be sacrificed to the moloch of æsthetics that requires flour to be white in order to be fit for food?

In the following list I have reserved my rights for the reason that I have found it necessary to protect the lists from alteration by others:

DIET LIST FOR LACTATION,

On the Salisbury Plan.

(All Rights Reserved.)

BY EPHRAIM CUTTER, M.D., BOSTON, MASS.

Member Gynæcological Society of Boston, Victoria Institute, London, Etc.

Aliments include air and drinks. Food should be pure, seasonable, healthy, properly cooked, regularly taken and liberally eaten. Besides the æsthetic view of food there are the chemical—kinetic—physiological, pathological, and therapeutical. Common sense estimates include all these. As the object of lactation is a plentiful supply of milk that answers the above standards, the nursing mother should not allow love of the beautiful alone to select her food. While food should not offend the senses, it should contain all the elements found in the infant's body, be rich in blood, nerve, bone, muscle, vascular, glandular, respiratory elements. In other words, as we feed kine for milk, birds for health, and horses for work, by giving them their natural food, so we should feed nursing women on their natural food, to wit, two-thirds animal and one-third vegetable (Salisbury). Besides, it would be better to live on the diet during gestation.

List of Foods.

ANIMAL FOOD.

Milk,
Eggs,
Cream,
Cheese,
Beef Steak,
Sirloin Steak,

Pigeon,
Squab,
Fish of all kinds, aquatic or marine
Salmon,
Eels,

Porterhouse Steak,
Roast beef,
Corned beef,
Beef tongue,
Tripe,
Ox tail,
Calves feet & heads
Pork, fresh & salt
Pig's feet and heads,
Sausages,
Chicken,
Geese,
Haddock,
Soup,
Perch,
Halibut,
Sword fish.
Cusk,
Clams,
Clam water,
Shell fish.
Oysters,
Scollops,
Shrimps.

VEGETABLE FOOD.

Wheat, whole, cracked, crushed, and baked like oatmeal.
Arlington wheat meal,
Franklin mills entire flour,
Cold blast,
Carr's Graham flour,
Oats,
Rye,
Maize,
Buckwheat,
Peas,
Cabbage,
Tomatoes,
Celery,
Onions,
Spinach,
Lettuce,
Dandelion,
Parsley,
Radish,
Cranberry,
Turnip,
Squash,
Carrot,
Pickles,
Fruits,
Apples,
Irish moss.

NOTE.—The patient is not expected to eat everything on the list in order, but to make selections according to will; but the articles in italics are preferred.

5 Somerset St., Boston, Mass.
Aug. 2nd, 1880.

FOOD AS A MEDICINE IN UTERINE FIBROIDS.

In the JOURNAL (see above) Oct., 1877, I put myself on record as having cured fibroids by diet. I desire to say to you, Dr. Sims, that these experiences have been repeated since—that in Sept., 1880, I read before the Gynæcological Society of Boston a list of thirty-nine (39) cases that Dr. Salisbury, with whom the practice had originated, had cured by the same means. In the proposed work we expect to swell the list to over three hundred cases.

You know very well that I have not been timid in my attacks on uterine fibroids surgically; but as time goes on, I predict the adoption of the Salisbury plans—that is, if our experience is repeated in that of others. The difficulties in the way are great, and the greatest difficulty is in the proper carrying out of the diet. I know gentlemen that have tried the plans and have failed. I have myself failed because I could not control the diet: but in those cases that have been faithful to the diet, most have been rewarded by a splendid success. I think, in order to convince such minds as yours, that the best plan would be to have patients treated in a sanitarium, in some central locality, where the patients could not get off the diet, and under the supervision of an attendant who is skilled in the Salisbury plans; where the diagnosis could be verified at the start by experts like yourself, and where the patient could be watched during the treatment.

The *rationale* of the Salisbury plans is, that uterine fibroids are diseases of nutrition—an hypertrophy of the fibrous and muscular tissues due to impoverished food, and an excess of carbo-hydrates. When you reflect that no agency comes so intimately, so continuously, and so naturally as food, and that there is a considerable amount of force expended in simply replacing tissues, it is easy to see that if the repair forces of the system are not kept up to their normal strength, that the tissue may run riot, just as when governments have all their energies occupied.

In quelling a rebellion, another one may break out in another quarter; but, explain as you please, the great fact remains that quite a large number of cases have been cured by this process of food treatment. See as above, *American Journal of Obstetrics*, for diet list.

FOOD AS A CAUSE AND CURE OF OVARIAN TUMORS.

In 1863 Dr. Salisbury had a paper detailing his experiences in relation to this division of our subject. It is kindred to the last topic, and will receive attention in the work alluded to. It is a new announcement that cures have been effected by this method. But it is none the less true.

FOOD AS A CAUSE AND CURE OF DIABETES.

In the Virginia *Medical Monthly*, Nov., 1880, is Dr. Salisbury's paper on this subject, extracted from a paper on the cause and the treatment of diabetes mellitus, ready for the press in 1864. He says: "In this disease the lobules of the liver, or that portion of the gland which is directly connected with the blood vessels, and which organizes glycogenic matter or animal sugar, is the part that is directly involved. This portion of the liver is too active and makes more sugar than is required. This excess has to be eliminated, and the kidneys have this work to do. Soon they become overactive, and little by little become involved indirectly in the disease. To effect a cure we must cut off all food, as far as possible, that goes to make animal sugar. This includes vegetable food, fruits, animal fats, tendon and connective or glue tissue, and cartilage; also excess in drinks. Medicines alone will not cure the disease. They are only aids in restoring a healthy state after the cause of the unhealthy alimentation has been removed. None but careless feeders have this disease, unless, in rare instances, it may be imperfectly developed by local injuries. Diseases in organs, which arise from defective or unhealthy alimentation, are the results of confirmed habits in eating too exclusively and continuously food which, in the way of proportion in which it is taken, cannot be well digested; consequently it is unfitted for assimilation. The chemical and vital changes of fermentation, decay, and cryptogamic development set in, resulting in the production of agents debilitating and poisoning to the various vital organs; which they reach by being more or less taken up by the gland cells of the digestive apparatus. These diseases are pathological habits in the organ or organs affected, and have been brought on by being continuously compelled to do and to be exposed to labors unfitted for them to perform or endure, without becoming more or less over-taxed, enervated, deranged, paralyzed and changed in function, and eventually in structure."

The drinks, food, bathing, exercise, clothing, and treatment are fully set forth in the extract alluded to. I am happy to say that cures are effected by this plan.

FOOD, &C., IN CONSUMPTION.

The Salisbury plans in consumption look more like introducing an era of positive medicine than anything we have come across in the history of medicine. When a man comes forward who shows that he has caused a disease in 104 cases by feeding yeast in the food, and verified it by *post mortem* examinations in the individual cases (104); moreover, shows how to detect the pretubercular state and the disease in the blood; moreover, presents cases of cure for inspection; moreover, when another man appears, who verifies the treatment and cure of the same disease by the same methods, then I think, if the men are pronounced not insane and worthy of credit, it would seem as if there was something certain in medicine. We are such men, and consumption is such a disease. In 1858 Dr. Salisbury had a work ready for the press, in which he relates the account of his experiment with over two thousand swine. As to food, he fed 1026 swine on food filled with yeast. Soon diarrhœa came on. He found the yeast in the blood, and, to be brief, in the course of eight weeks 246 of the swine died, and of these 104 were examined with the result stated. Moreover, he hired men by the day to eat their food filled with yeast, or food that is the food of the yeast plant. Diarrhœa came on in all, and the presence of the yeast was found in their blood. Again, he has treated over 1,000 cases in the last 25 years, and, to put it mildly, he has claimed to cure over two-thirds of the cases. In the forthcoming volume of the Transactions of the American Medical Association for 1880, I publish seventy cases of my own observation, in which the proportion of one-third cures is maintained by the Salisbury plans.

Under the proper conditions, Dr. Salisbury has cured two-thirds of his cases. But in my labor the great difficulty has been to induce them to enter into the work as they should, and ignore the cravings of diseased appetites. The road is long but safe. Variety is not wanted, but the best and most adaptable food for bringing about and maintaining the most perfect health.

Hence the need of a sanitarium, to enforce the diet rigidly, and meet the exigencies of each case, as they come up. In his sanitarium, Dr. S , by personal care, enforcement and example, has been able to secure his wonderful success. My proportion of one-third was got under unfavorable circumstances.

In the Washingtonian homes the cures of drunkards are effected by the sympathy and encouragement of reclaimed inebriates. I have known of a most desperate case thus saved lately, so in the present disease there is a terrible appetite to conquer, and the patient needs all the aid that can be got in every direction.

In the Virginia *Medical Monthly* is the full text of the treatment of consumption by the Salisbury plans. It is an extract from the full work which, with my corroboration, is yet to appear, when demanded. Twenty-five years ago Dr. Salisbury made bread from the yeast in the diarrhœal dejections of third state consumptives. I send you some bread I had made after this process in 1878.

Although medicines play an important part in the cure of consumptives, still the key-note of the Salisbury plans is to remove the yeast from the blood and build up the system by putting the great glands in good order, so that they can run the system properly. The full development of this topic would fill a large volume. Indeed it fills a volume. I hesitate not to repeat for myself that I have found nothing like this in the history of medicine.

Consumption is a lung disease, found in the blood a year before organic lung disease. Tubercle is an accident, a secondary formation, caused by embolism and so forth.

FOOD, &C., IN DISEASES DEPENDING ON FATTY DEGENERATION.

Atheroma—broken heart—cerebral hæmorrhages, Bright's disease of the kidneys, in some of its forms, come under this head.

The *rationale* of their production, in the light of the food question, is clear. It is only necessary to have starch and sugar in excess so to have conditions favorable to the development of the different forms of fatty degeneration ; that tissues are changed into fat and thereby weakened in strength ; they are not able to stand the normal vascular pressure, and thence rupture like a worn-out hose pipe, so that some of the pathological results of this lesion are explained on the ground of mechanical weakness. Of course it does not explain all the symptoms and results, but it is a most important pathological condition. It is relieved by excluding starch and sugar from the diet. As the food goes to the most intimate and profound structures of the body, and as food, excluding the carbohydrates, does not tend to the increased production of fat, hence it follows that a confinement to such food arrests the process of fatty degeneration, and often cures it by the deposition of normal tissue in its place.

It is strange that advantage is not more taken of the fact that the whole body can probably be all remade over in the course of seven months, at a low estimate. We are well aware that fatty degeneration is a normal process of old age in the animal. Also from some microscopical examinations made of the fading maple leaves, in the fall, and finding that the parenchyma of the leaf undergoes a form of change exactly like fatty degeneration, accompanied by a peripheral deposit in the ducts of the stem that blocks up the canals, cuts off the sap, and thus possibly causes the degeneration—still we have the disease of fatty degeneration long before old age, and our experience teaches us to expect, by changing the character of the food from the carbohydrates in excess to animal food of a lean character, that many persons would recover who are now lost.

FOOD A CAUSE AND CURE OF DISEASES OF THE NERVOUS SYSTEM.

It is easy to see that if the nerve centres do not receive their proper food, the nervous system is liable to suffer. For this reason we deprecate the withdrawal of the gluten cells from our flour as a direct damage to the nervous system. The chemists tell us that there is a withdrawal of 75 per cent. of the phosphates from the milling of flour. The morphological examination of flour and wheat compared confirms this statement. Now, when we consider that flour is the pre-eminent food of the present time, we think we are not mistaken if we feel like referring the general prevalence of neurasthenia and other nerve disorders, as compared to former times, when the use of flour was not so common, other things being equal, to the use of this impoverished food. We have been told that the treatment of imbeciles and idiots is now based on this idea. As we look at it, we cannot expect to have good nervous systems, unless the proper nerve food is present in the aliment. Of course other causes co-operate, but as bricks cannot be made without straw, so cannot the nervous system be organized normally out of elements that are deprived of their phosphates and other nerve elements.

This subject is capable of great expansion. We might show how we believe that the prevalence of the neurotic diseases of women abound because of the exclusion of the phosphates from the food.

The fact is, nerve centres must be fed. Mere stuffing is not feeding; but true feeding consists in giving the human body aliment that contains all the elements found in the human body in proper proportions, and in assimilable forms. Then the nerve force is supplied that runs, so to speak, the body; and all the various parts get their normal amount of legitimate nourishment.

I have thought indigestion was sometimes so difficult in some cases because the independent ganglionic nerve centres of the abdomen did not get fed. On this principle has it seemed to me the cure of constipation is based. Some have attributed it to the mechanical coarseness of the food. But as the cures have been just as constant in instances where the flour has been very fine but included the gluten cells, I have thought the constipation was cured simply by giving the ganglia their proper food. From this we have also inferred that the best way to treat nerve diseases was to feed them well, and then, if they did not respond, to rouse them up with neurotic medicines. When a horse, for example, needs hay, grain, and feed, it is a poor policy to use whip and spur first. Dr. Salisbury teaches us that the red blood corpuscles are covered by what he calls neurine, or nerve food. When there is an absence of this neurine the globules become sticky and adhesive. It is wonderful how readily sometimes this coating is renewed by proper food. Again, I suppose that none will deny that muscles act under the power of nerve food. For cut the nerve and the muscle to which it is distributed is useless. So when I think of the heart propelling, according to Rufus King Browne, the blood through capillaries that would, if possible to have them isolated and attached together, reach over 12,000 miles, of course it takes force to drive blood so far. And this brings me to remark that I think most people underestimate the amount of nerve force expended in simply running the animal body machine when it performs merely the functions of life. Especially is this the case in growing persons. This principle is recognized in the rearing of horses. Colts are not thought strong enough to work, but the human animal, when young, if not working is thought to be lazy. Often have physicians warned mothers about overworking young girls. So, again, human mothers are overworked during gestation, and by this over-use of nerve force the child has to come short, and it is a serious question whether many of our patients have not been cheated out of health simply by the overworking of the mother. If brood mares are not worked for fear of injury to the foal, much less should the human mother be overworked. The moment we begin to recognize the limit there is to nerve force in the body, that moment will there be a more judicious expenditure of it. These things come home with increased application if there is constant underfeeding of the nerves.

Most practitioners are familiar with diseases caused by too much tax on the digestive nerve powers. I suppose that colic is one of the most common examples of this. Again, colic may be caused by diverting the nerve force, so that there is none left to digest the food. The writer furnished an instance of this while he was recovering from a fractured patella. He conceived the notion that it would be a good idea to write up the history of the fracture; so, while feeling very well, he had his library ransacked to find the oldest book on the subject, down to the latest. He began with Heister's Surgery, 1754. He copied out the main points in this; then he worked on more or less all day. He became much interested, so that he forgot all about his limb; but towards night he noticed that the injured limb was very impassive and cold. Soon after a violent colic seized him in the epigastrium ; it was severe, and occupied all attention. Thinking it might be caused by the food being fermented, an emetic was administered ; the food was ejected, but it was sweet and undigested. The pain continued. Finally, means were resorted to to restore warmth to the injured limb, and then the colic was relieved. It seemed that the food had not digested at all since dinner. The *rationale* of the thing seemed to be that my nerve forces were all used up in running the heart, brain, fractured knee-pan and study; so that there was none to digest the food. Hence the colic, as a warning of nature that I could not study, digest my food, and take care of the knee-pan fracture. It was too much work. Whether I am right or wrong in my reasoning, I am certainly convinced that under similar circumstances I shall regard myself as doing a good day's work simply to lie still and let my nervous system run the machine. I believe I have reason to think that the digestion is under the control of the nerve force, for the most part, that comes from the ganglionic centres, and that it is possible to overwork them by improper feeding.

FOOD AS A CAUSE AND CURE OF INDIGESTION.

The microscopical and macroscopical examination of the fæces reveals the most striking evidence as to this department. Probably no man has done more in this direction than my associate. I have followed him somewhat long enough to sustain his position. Muscular fibres are found in the fæces, but not abundantly unless salted or fried. The teguments of the grains—the connective fibrous tissue—the parenchyma of roots, stems, fruits and vegetable food in general—occur in large quantity in healthy fæces. Dr. Salisbury is particularly opposed to the use of beans as food. They go through the alimentary canal *en masse*, generally undigested. This is due to their structure. The starch grains are done up in compact oval bundles, with a thick fibrous envelope that resists outside influences, especially the digestion. The starch grains look like eggs done up in a transparent bundle. One test of their cooking I have found to be polarized light. Before they are thoroughly cooked they polarize light, and are distinct in outlines. After cooking they do not polarize light, and are mingled together in one homogeneous mass. Owing to its great indigestibility, Dr. Salisbury says beans ought to be cut off from human foods, as man has not the digestive apparatus for them, and they don't digest well.

The subject of chronic diarrhœa has been made a special study by Dr. Salisbury. It is the old story of starch fermentation and its products, acting physically on the intestines, making the villi drunken with carbonic acid gas. In this state the epithelial cells take in anything, like a drunken man, and transmit it to the blood. In fact, a vast deal of trouble is caused by the abnormal fermentation in this disease. The story is too long to be told here. He tells it well elsewhere.

Finally, my dear Dr. Sims, I would bring this long letter to a close, not because the subject is exhausted, but that your patience may be.

You asked for details. I could give them, but I think the most desirable way to convince is by facts not words. If it was possible to arrange that cases of the chronic diseases you are most interested in could be treated faithfully on the Salisbury plans, under your inspection, by Dr. S. and myself, and thus give you an opportunity to watch the actual progress of the cases for yourself, we should like it much better than to put you off simply with a monograph. I think our mutual friend, Dr. Sayre, could say that, notwithstanding all his freely pouring forth what he knows as to the treatment of humped back by the plaster cast, still cases continue to come under his notice where the plan has been a failure, not from any inherent trouble with the plan, but from the oversight of some apparently insignificant detail.

So has it been with us. We therefore think it best that we should see for ourselves that in all test cases the work should be thoroughly done. If, after a fair trial, we fail to establish the same results that we have already attained, we shall apologize for our error in judgment in carrying out what we have believed to be our duty, but we shall not apologize for having acted up to our convictions of duty.

Thanking you for the courtesy which you have accorded in inviting this letter, I am,

Very respectfully yours,

EPHRAIM CUTTER.

NOTE.—This letter is published in this JOURNAL with the consent of the writer, and at the request of Dr. Sims.—ED.

VIENNA, AUSTRIA, Dec. 30, 1880.

Dr. E. S. Gaillard:

DEAR DOCTOR—I send you the reports of three cases of placenta prævia, which I hope will be of interest to the readers of your journal:

I. M. H., 32 years old, married; seven months' pregnancy.—Was admitted into the ward on the 2nd November, on account of bleeding. Examination showed the cervix to be about five inches long, and dilated sufficiently for one finger. Above, the circumference of placental tissues could be felt. The child, which was small and not at term, presented a transverse position. The bleeding ceased without interference. Two days later, in the evening, her temperature rose to 38 w c, accompanied with profuse bleeding. Cervical condition unchanged; colpeurysis; one hour later tampon was expelled, followed by fresh bleeding, and as the anæmia was becoming critical, steps were taken to turn, although the cervix was only active wide, but dilatable. Two fingers were introduced, and the placenta, which was found to be nearly central (the largest half being just a little to the left) was bored through, in order to reach the feet. Turning easy. Body extracted as far as head, and the head was soon spontaneously expelled ; profuse bleeding ; manual extraction of partially adherent placenta. Cold water injected into utera. Subcutaneous ergotin; massage ; bleeding persistent ; anæmia alarming. Three ether injections, subcutaneous ; hot water injected into uterus.

The uterus now began to contract, and the site of the placenta was freed from all blood and coagula by good contractions of the fundus ; in spite of this the bleeding continued, and on closer examination a left cervical rupture was discovered, which gave rise to the bleeding. The following remedies were now resorted to: Compression of abdominal aorta; Esmark's bandage; tamponing cervix and vagina with cotton saturated with perchloride of iron, all to no effect.

After this failed, the cotton was introduced into the rupture through a Sims' speculum; clamps and forceps were applied to the edge of the wound; all the instruments taken out; repetition of cotton tampon with counter pressure from outside in the contracted fundus, all of which failed to check the bleeding. Pulse could hardly be felt, and death took place two hours p. p. from fatal anæmia.

Autopsy—*Anæmia universelle.* In the left cervical region a 6 ctm. long rupture; uterus large and flabby; morbus Brightii in third stage.

Child dead, prematurely; 1610 grm. 43 ctm. long.

II. C. B., 39 years old, single; second child.—On examination placenta prævia was diagnosed; it was found to be a little to the right and in front. The cervix was only three fingers wide; child gave a breech presentation. The woman was bleeding freely, but this was checked by the child entering deep into the pelvis; unfortunately there was a complication, consisting of a prolapse of the cord. It was impossible to replace it, since in such an attempt the life of the woman would have been jeopardized. The heart's sounds soon grew weak and slow; in three-quarters ot an hour they could not be heard. The cord was withered, and the child pronounced dead. After this the child was extracted dead; 3900 grm. 53 ctm. long.

Placenta expelled spontaneously; profuse bleeding, which lasted nearly two hours, in spite of massage; cold and hot water injections into uterus, and subcutaneous injections of ergotin. These finally succeeded in checking the bleeding, but not before the woman had become very anæmic and weak. The next day the temperature began to rise: on the 3d, it had reached 39 c. From this time she became very restless, often delirious, and seemed to suffer very much. On the seventh day after confinement she died from circumscribed peritonitis.

III. F. C., married, 40 years; seven months' pregnancy.—Was received on 2d Dec. At that time she was not bleeding, but said she had lost a considerable quantity of blood at different times, which was very probable, as she was quite pale when received. The placenta was found to be a little to the left; child small; head presentation; second position. On the 5th, three days later, bleeding set in anew; cervix only 4 ctm. wide. Version was made by internal combined with external manipulation. One foot was drawn down as far as possible, in order to check the bleeding. The child was now extracted very slowly, on which account it died. Weight of child, 2890 grm.; length, 49 ctm. The extraction was followed by profuse hæmorrhage, and the placenta was quickly expelled by pressure on the uterus.

After the expulsion of the placenta the bleeding continued, as the uterus was not contracted in the place of the placenta. Cold and hot water were now injected into uterus, with vigorous massage from outside. Ether and ergotin were administered subcutaneously. These remedies combined (I hardly know which did most good) succeeded in contracting the uterus firmly, and with that the bleeding ceased. The puerperal condition of the woman was quite normal, and in fourteen days after her confinement, she was discharged from the hospital.

In case No. 1 the bleeding was so

severe that it was thought advisable to deliver as soon as possible, but, unfortunately, the extraction was made too rapidly, which resulted in a rupture of the cervix. This was unavoidable, for if the child had remained in the uterus until the os dilated, the woman would have certainly bled to death.

One of the rules here, in cases where the placenta is not central, is to turn and draw the child down on the placenta, in order to control the bleeding by pressure. There is but little consideration shown for the life of the child; it is generally considered good if the woman is saved. These results could not be called brilliant ; but I thought I would report the cases, to give the readers some idea of the treatment of such cases, as practiced here.

Respectfully yours,

J. M. BUCHANAN.

DISREPUTABLE.—The following letter has been sent to this JOURNAL, by a prominent physician of Kentucky. It appeared in the *Kentucky New Era*, a newspaper published in South Western Kentucky, and at the home of the author of the letter. Dr. R. W. Gaines has been honored, in times past, by being elected to the Presidency of the Kentucky State Medical Society; an organization whose constitution makes an observance of the code of medical ethics and the proprieties of professional life obligatory upon all of its members. It is not necessary to do more than to publish this letter ; it requires no comment ; for it carries, with its publication, the most severe and just condemnation. Apart from its being an outrage upon the code and custom of physicians, it is so abject and pitiful, that one can scarcely believe it was written by any one of respectability. Such an act a Society cannot pass by unnoticed, and nothing but a public apology, through the same newspaper, should save the offender from the deserved official censure of the Societies of which he is now a member. Here is the letter ; a letter full of the fulsome flattery of one partner by the other, for the joint-stock benefit and profit of the Firm. A letter in which the author essays, in the language of Hamlet to Horatio, to "crook the pregnant hinges of the knee, that thrift may follow fawning." This letter being made public property by its author, it is dealt with accordingly.

A CARD FROM DR. GAINES.

HOPKINSVILLE, Jan. 1, 1881.

Allow me through the medium of your excellent and widely circulated paper to return to the good people of Christian county my hearty thanks for the gratifying support they have given me in the past, and to state that I have this day associated with me in the practice of medicine Dr. Frank Clark, a gentleman of culture, refinement and pre-eminent qualification, and I hazard nothing in saying that there is not a man in the State of Kentucky who has a better medical education; consequently, I can, with much confidence, reccommend him to my patrons and friends as one eminently worthy of their patronage and support. Our office is on Main Street, over the storehouse of J. T. Savage and opposite the Phœnix Hotel, where we will be glad to see our friends, pledging them our best services.

RICHARD W. GAINES, M.D.

GREENWOOD, ARK., Jan. 25, 1881.

Dear Doctor :—In the October, 1880, number of the *American Journal of Medical Sciences*, appears an admirable article from Professor Porcher on the Diagnosis of Valvular Diseases of the Heart, and in the December number of your JOURNAL I find a short commendatory notice of the same. The article referred to is certainly worthy of careful study by all and more especially the younger members of the Profession who desire to familiarize themselves in a pleasant and easy way, with the physical signs of Valvular Diseases.

But by referring to Part XXX. *Braithwaite's Retrospect*, for January, 1855, page 53, I think you will fiind that Dr. P. has been anticipated by Dr. Alexander Harvey, Physician to the Aberdeen Royal Infirmary. Dr. H. publishes a series of notes, taken, he states, mainly from Dr. Watson's lectures and Allison's outlines, etc., wherein he formulates the signs and their significance thus:

"Bruit: If systolic and loudest at Base=Aortic Obstruction. Apex=Mitral Insufficiency.

Bruit: If diastolic and loudest at Base=Aortic Insufficiency. Apex=Mitral Obstruction."

This may "be represented on a card carried in the pocket and on the reverse side of card."

"Pulse: If regular,
Full or strong, } =Aortic Disease.
Jerking, resilient,

Pulse: If irregular,
Intermittent unequal, } =Mitral Disease."
Soft, small, weak,

Thus, I think you will see that the whole ground (*and a little more*) has been covered. Is there really nothing new under the sun? *Palmam qui meruit ferat.*

Respectfully yours.
J. W. Brudlove, M.D.

St. Elms, Ill., Dec. 1880.

E. S. Gaillard, M.D.

Dear Sir:—I see in the Journal of November, 1880, a list of long-lived Physicans. Please allow me to add another case. I was born in Ireland in 1800, graduated in Edinburg, Scotland, 1820, practised in Ireland till 1824, then in Pennsylvania until 1856, and in Illinois until the present, in all 61 years, and still going it in sunshine and storm.

Respectfully yours,
J. T. Frazer.

Savannah, Ga., Dec. 27, 1880.

Dear Sir:—The Georgia Medical Society has appointed the undersigned a committee to apply to the health authorities of the larger cities of the United State for an authentic statement of the number of deaths from infantile diarrhœa (including cholera infantum) during the months of July, August and September in each year for the last four years, and also the total mortality (adults and children) in the same months and for the same period. The object of the Society in collecting this information is to bring the subject before the profession at large, in the hope that the discussion which may ensue, will lead to the discovery of the cause and prevention of this very rapidly increasing disease. Will you please furnish me with this information concerning your city and direct it to your

Obedient servant,
J. C. Le Hardy, M.D.,
Committee.

Brooklyn, Feb. 4, 1881.

Dr. E. S. Gaillard,

Dear Doctor:—There is no way known to me whereby Salicylic Acid can be dissolved in water to any useful strength, and kept as free acid. When Borax is used a solution of any desired strenth may be made. But a double salt is said to be formed and therefore it is not a solution of the acid. The best plan that I know of getting the the effect of the free acid, is to take the amount of acid and water desired, and then add bicarbonate of soda until solution is effected. This makes a solution of the acid in a solution of sodium salicylate.

Very respectfully yours,
E. R. Squibb.

Note.—The editor takes the liberty of publishing this useful note.—Ed.

MEDICAL CONFESSIONAL.

Peccavi.

As no one feels willing to confess his professional blunders, for the benefit of his brethren, I embrace the opportunity of using the space, preferably given to others.

In August, 1854, soon after being invited to take charge of a large practice in Middle Florida, and a few months after my graduation in medicine, I was asked to see a case of compound, oblique fracture of the tibia and fibula, caused by the passage of a loaded wagon over the injured limb. The patient was a negro man, the driver, an athlete, about thirty-five years of age, and owned by a wealthy farmer, Mr. Murphy, of Jefferson county. The fracture, after the removal of a small piece of bone by the bone pliers, was reduced and placed on McIntyre's double inclined plane, with the additional precaution of having both extension and counter extension applied by a foot-board and perineal band, and operated each by a ratchet and pinion moved by the usual key. The patient was left in charge of his wife and his owner, entirely comfortable, and with complete adjustment of the fracture. Indeed this adjustment was so satisfactory, and the patient was left in such efficient hands (the owner's and the wife's), that I did not return to examine the fracture for five days; supposing that "no news was good news," and that if anything "had gone wrong," the intelligent owner would observe and report it. I was overburdened with work, and the patient was eight miles distant from my office.

I shall never forget my chagrin and discomfiture on my second visit. The fracture was just as it had been before reduction was effected; the bone blackened and dry, protruded, and there was a black spot indicating the area of an imminent slough.

☞It seems that the wife had observed where the key, which controlled the ratchet and pinion, had been hidden, and as her husband suffered greatly during the first night after the fracture, she had applied the key to the shaft, and had slackened all of the apparatus, causing the bones to again override, and all of the soft tissues to be subjected to bone pressure.

It was manifest that the case had become critical, and as the farm was eight miles from my office, with a good road intervening, I insisted upon having the patient brought near to me. This was done, but under the most attentive and anxious treatment, every effort to produce union failed. Six weeks after the fracture, I asked my friend, Dr. Thomas M. Palmer (then and now of Monticello, Fla., and a subscriber to this journal), to see the case with me. It was deemed best to resect a portion of the tibia, and this with his skillful aid I accordingly did. It seemed, however, that almost irreparable failure of nutrition had resulted from my bad management, and as a result, partial union only took place. The patient suffered from his protracted confinement. General anasarca ensued and resisting all treatment he died in the autumn of that year.

A more favorable case of oblique fracture could not have been desired, and yet, from the causes and the carelessness mentioned, a fatal termination resulted. The deduction is so simple, that it is not necessary to make it.

It has been supposed that a fracture treated and locked up in McIntyre's doubled inclined fracture apparatus, and carefully surrounded by roller bandages, must be safe, or would be safe; but this is not the case, so long, at least, as an affectionate and foolish wife is in charge as nurse, and a sanguine and inexperienced young doctor is placed in control. No one, under any circumstances, should consider even such a fracture dressing safe, nor should he be excused if disaster results, on account of his failure to constantly keep the patient under careful supervision. This was a death directly due to the error of the doctor.

E. S. GAILLARD.

REVIEWS.

"Judex damnatur cum nocens absolvitur."

A Treatise on The Principles and Practice of Medicine. By AUSTIN FLINT, M. D., Professor of the Principles and Practice of Medicine, and of Clinical Medicine, in Bellevue Hospital Medical College, etc Fifth edition. Revised and largely re-written. Philadelphia: H. C. Lea's Sons & Co., 1881.

There are few physicians who have not a copy of this work. There are none who are not familiar with it, or have not heard of it sufficiently often and accurately to form a fair appreciation of its contents. The present edition is the fifth. The last was issued in 1873. A great feature of the work, and one which will command for it respect and support, is, that it embraces in its scope general pathology, as well as practical medicine. Indeed, no work on the practice of medicine which omits general pathology is worthy of recognition, respect, or support; for general pathology forms, or should form, the basis of every such work; and without it the work is like a house without a foundation. It may be added, here, that the facts in regard to so much of general pathology as is germane to a work on the practice of medicine, are very generally and faithfully recorded in this volume. The whole of the first seven chapters are devoted to a presentation of the general pathology of the blood and of the solid tissues. This part of the work has been chiefly prepared by Dr. W. H. Welch, Lecturer on Pathological Histology in Bellevue Hospital Medical College. He has also revised, and in a great part rewritten, the descriptions of the anatomical characters of the diseases in the rest of the volume. It may justly be said that these labors of Dr. Welch are highly creditable to him, and reflect very accurately the present state of professional knowledge in regard to general and special pathological anatomy, in their immediate relations to the practice of medicine. He has also assisted very materially in preparing other portions of the volume. The author does not, as is so usually done, merely acknowledge in general terms the aid of his assistant, but gives him, very carefully and fully, all of the commendation to which he is specifically entitled. This course is worthy of special mention and praise, and it is an example which should be generally adopted. There are some changes in this edition worthy of special notice—viz., a new section devoted to diseases of the hæmatopoietic system; the classification of diseases of the nervous system on an anatomical basis, in lieu of the basis (the symptomatic) formerly adopted; a fuller presentation of many subjects, and the addition of of several never before presented by the author. One feature of the work worthy of mention is, that while many of the views and opinions now presented are antagonistic to those previously expressed, there is no hesitation or reserve in giving them. Such independence and candor are highly creditable; for, while it is the part of a wise man to change his opinions for sufficient cause, there are few authors who have the courage or the frankness, or a sufficient sense of justice to do so.

One of the most conspicuous changes of opinion manifested by the author is in regard to lobar pneumonia, which he regards now as a specific *general* disease and not a local inflammatory affection; it is therefore now termed by him pneumonic fever. It is only just in so important a departure from recognized and generally received (if not established) views, to give the author's own defence of his present position. He thus writes:

"In relation to the morbid anatomy the quantity of exudation, amounting to from one to two pounds, if a single lobe be affected, and sometimes reaching four pounds if the affection embrace an entire lung ; the derivation of this matter from the blood in the branches of the pulmonary artery; the removal of the exudation by absorption, leaving the air-vesicles intact; the extension over a lobe by degrees, the progress often being slow ; the invasion successively of a second and third lobe in a certain proportion of cases, and the laws of the disease, as regards the greater liability of the lower lobes and of the lower lobe of the right lung—these are the points which, to say the least, are suggestive of the dependence on a constitutional morbid condition, the latter being essentially the disease. It is not easy to reconcile the pathological facts just stated with the doctrine that the pneumonic products are the results solely of a local inflammatory condition ; and if a prior constitutional condition be essential, that condition is fever. In some regards the anatomical characteristics of pneumonic fever bear a close analogy to those of typhoid fever."

With due deference to the author, it is claimed that his position is not tenable, and that the defence of it is imperfect. The profuse secretion mentioned is chiefly due to the fact established by the French that, in the great majority of cases of lobar pneumonia, the bronchioles are implicated, and this being the case, the profuse secretion mentioned is readily explained. Complete removal of the exudation by absorption does not render improbable the previous existence of a true local inflammatory action. It is indeed only what takes place in perfect recuperation after all inflammations which have reached the exudative or second stage. The slow extension of the inflammation, is not an evidence that the inflammation is due to a specific general disease, for there are many instances of specific general diseases in which the extension of inflammation is not "slow" but rapid ; as in rheumatism, gout, scarlatina, epidemic peritonitis, epidemic cerebro-spinal meninigitis, etc. Again, the greater liability of the lower lobe of the right lung to inflammation does not show that such inflammation is due to a specific general disease, for in true hepatitis the right lobe is almost always the sufferer, to the exclusion of the left. The same fact may be observed in regard to other organs. It should also be remembered that when inflammations are due to a specific general cause there is not usually any elective tendency manifested. In pyæmia, in epidemic cerebro-spinal meninigitis, in epidemic pleurisy, etc., there are no such elective peculiarities manifested. In discussing this subject, it should be borne in mind also, that the local phenomena precede the constitutional and that unless in typhoid fever and other allied fevers the pulmonary inflammation precedes the fever ; while if the peneumonia were due to a specific general cause, as is claimed by the distinguished author, the fever would precede the local disturbances.

There is not space, however, in a journal of this kind to say more in reviewing the peculiar claim set forth in this volume in regard to the etiology and pathology of lobar pneumonia. It may be mentioned, however, that the claim of the author as to lobar pneumonia not being due at times to traumatic cause is contrary to general if not established experience.

The additional claim that dysentery does not recur in the same individual is also contrary to general observation.

But in regard to a work so deservedly accepted as authority, criticism, however just, is not demanded as a guide by the professional reader.

This edition differs so much from all previous editions, on account of the revisions, eliminations, amplifications, and additions, so conspicuously manifest, that no one can be said to possess the actual views of the author on the practice of medicine, unless he becomes the possessor of this volume. It is certainly the only American work on this subject which can be unreservedly recommended, and the only one which does justice to American authors, observers and practitioners. Indeed, this spirit and the uniform manifestation of eclecticism, on the part of the author, are most creditable and welcome; and in their observance and display, he does the amplest justice to his countrymen. He recognizes the talent, the sound judgment, and the abundant labors of American physicians; and by so doing has added largely not only to the value of his work, but to his own character, as an author, for uniform eclecticism in the elaboration of his material, and for his evenhanded justice in the presentation of it. If there is anything, in regard to which the American medical public is particularly disgusted, and justly outraged, it is the affectation on the part of so many American medical authors of failing to find merit in their medical countrymen; and of pretending that their days are like those classic days in Palestine, when the coming of the wise men was always "from the East." This work on Practice can be unreservedly commended.

The publishers have issued it in a manner most excellent. It can be obtained bound in cloth, leather, or "half Russia." This last style is recommended to each reader who desires attractiveness on the outside, as well as value in the inside of his favorite volumes.

On the Bile, Jaundice, and Bilious Diseases. By J. Wickham Legg, F.R.C.S., Lecturer on Pathalogical Anatomy at St. Bartholomew's Medical School, London, England. D. Appleton & Co. New York, 1880.

Had Solomon, who was desirous of becoming a reviewer, lived in the present day, he would have added to the things which it was hard to understand—"the way of a reviewer with a book." The volume which forms the subject of this review has the misfortune to be dedicated to Prince Leopold in terms that amount to about as much as the familiar "Yours to command" at the end of a letter, but Leopold being a "royal" prince, and not the little great man of some political ring, this dedication raises the ire of some of our fierce democrats, notably the reviewers of the *Philadelphia Medical Times* and the *Chicago Medical Review.* The former of these gentlemen, fired by republican fervor, rushes fiercely at the dedicator and the dedication, and, his energies exhausted on this windmill. feebly damns with a few lines of faint praise the rest of the book. The Chicago gentleman sternly immolates the dedication on the altar of republicanism by tearing out the offensive page, and, having accomplished this sacrifice, is so fully recovered that he is able to read this book of seven hundred pages through "at a *single sitting.*" Passing from this terrible dedication to the book itself, the first chapter is found to be devoted to the chemistry of bile, which subject is continued through the three following chapters. The authorities given appear to be at Dr. Legg's fingers' ends. He divides the chemistry of the bile into three heads: "The Bile Acids," "The Pigments," and "Cholestearin."

The author very carefully weighs the evidence given by others in three of his chapters, and only adds such researches of his own as are calculated to elucidate them. The next five chapters deal with the physiology of the bile. Flint's researches in regard to cholestearin are given all due prominence, but are regarded as controverted by Hoppe Seyler's results, his stercorin being considered by that chemist as an impure cholestearin. Beneke is quoted as opposing Flint's opinion of cholestearin being an excrementitious product. The author says, respecting the function of the bile, that "it cannot be looked upon solely as an excrement, for it has been shown that deep changes in nutrition follow its diversion from the body. There is no evidence that it is necessary for the completion of the process of digestion in the stomach or intestines; indeed it may be said by some physiologists that it does harm to the process in either viscus. The view that it acts as a sort of natural purge has little against it; but at the same time there is but little in its favor. As to the power of the bile in arresting putrefaction, it would seem that it must be small, if, as soon as it arrives in the intestine, it begins itself to undergo putrefactive changes. The view that the bile neutralizes the acid of the chyme must fall with the establishment of the fact that the bile is not alkaline but neutral in reaction. The only office that remains to it is that of emulsifying fats, a property known to the Greeks 2,200 years ago, and of changing starch to sugar. It is melancholy to find that in so many years nothing more is known with certainty as to the uses of this long-studied humor."

It is strange that the author uses the word cholestearin, instead of the correct word cholesterine; the first signifying the fat of bile (a chemical and physiologieal error) while the last simply means the solid element of the bile.

From the bile he passes to the consideration of jaundice, devoting several chapters to the consideration of this subject, strangely discussing jaundice as a disease and not as a symptom. Acute yellow atrophy is then very fully considered. The book is exceedingly valuable, clear and concise, giving well-poised opinions on all the subjects of which it treats. It gives not those painful minutiæ of pathological histology which, without being of any value, lead the student to avoid pathology with holy horror. The Doctor's pathology, however, is really disease physiology, and not the dryasdust cant about cells, with which we have been regaled *ad nauseam*, since the advent of CELLULAR PATHOLOGY, by the servile imitators of Virchow, who should be regarded as cells in more senses than one. The book is very well issued, and well illustrated with colored plates. Here and there are evidences of hasty proof-reading, causing at times apparent ambiguity. The preface is a strong protest against the anti-vivisection mania now so prevalent, and should rouse the medical profession to oppose this baneful cant, which is becoming too predominant. In conclusion, nothing can be said about the book other than to add that every physician will find himself in its purchase and perusal amply rewarded.

K.

Transactions of the Medical Society of the State of West Virginia. Wheeling: *Register* Press. 1880.

Charles Lamb said: "I never read a book intended for review, because it excites prejudice." Allured by the neat appearance of this volume of Transactions, the writer ventured to look through it for something in keeping with its attractive exterior, but never was there greater disappointment.

If this offering is intended as a measure of the intelligence of the profession in West Virginia, the situation is lamentable; and there should go up at once, all over that State—whose motto is, "Montani semper Liberi"—a loud cry for the *school-master!*

If this volume had been cut short at the conclusion of Dr. Kunst's paper on the "Treatment of Typhoid Fever (just one-half its size), no discredit would have been done ; but the ignorance and nonsense manifested in the papers, "Operations for Vesico-Vaginal Fistula" (Mackey) ; "Meteorology and Disease" (Hildreth) ; and "Epidemics of Wheeling" (Frissell), and "Surgical cases (Frissell), are certainly very great. Dr. Mackey's paper has one merit—it is brief. Dr. Hildreth's claims to originality are certainly amusing. He says:

"My own conclusions are, that the light, heat, and other qualities of the sun's rays undergo daily modifications in their chemical and other properties, through the cycle of the year, thus producing the succession of the seasons in all their beauty and harmony, etc."

He might add, also—the sun moves!

Dr. Frissell's papers manifest bad diction, involved syntax, and unintelligible English. Professionally, they are without value. He is in favor of the "40-or-50-years-ago" treatment of inflammations—calomel, opium, tartar-emetic, and blood-letting. In proof of the value of the latter, he says:

"Females lose blood largely by flooding, and persons lose blood from wounds and injuries, with just as much impunity now as in times gone by, and often with great benefit."

One can only say here: Q. E. D.—"Quod est demonstrandum !"

Of "that great class of *mixed* fevers, called typhoid," he says, "every case, unless transported, that *lingers*, and results in fever, that is not caused by organic or some *special local disease*, is typhoid fever, whether the person calling it so understands the subject or not."

The press would fail of its duty if it did not speak thus plainly. The Medical Society of the State of West Virginia is composed of some of the best material in this country, and it should certainly not do itself the gross injustice of issuing such a volume.

Compendium of Microscopic Technology. By Carl Seiler, M.D. Philadelphia : D. G. Brinton; 1881.

This is a very reliable and valuable manual on the subject of its title. All processes are not given, but the writer endeavors to give always the best ; a valuable plan in every work ; it saves the reader time and labor, and the experimentalist much useless annoyance. To those who wish a succinct, lucid, practical guide for microscopic work, this volume is thoroughly commended.

Diagnosis and Treatment of Ear Diseases. By Alfred Buck, M.D, N. Y., Assistant Surgeon to the New York Eye and Ear Infirmary, etc. New York : Wm. Wood & Co., 1880.

This volume is intended to give the author's experience and views in regard to the diseases mentioned; and the material is drawn almost exclusively from his own records of practice. It is not probable that many general practitioners will or do give attention to even the most common aural diseases, while those which are rare and obscure are sent at once to the specialist ; still the physician doing a general practice must, of necessity, know how to diagnosticate and treat ordinary aural troubles. To these this work is recommended as being one of the simplest and best before the profession. It is simply and clearly written; the symptomatology is very strongly presented, and the treatment recommended is judicious and always practical in character. It is furnished with a good index, and is well issued. The publishers have observed the advice of the medical press, and this volume does not contain a single advertisement, where its predecessors were loaded, each, with a voluminous catalogue.

A Practical Treatise on the Diseases of Women. By T. Gaillard Thomas,

M. D., Professor of Diseases of Women in the College of Physicians and Surgeons, etc., etc., etc. Fifth Edition. Enlarged and thoroughly revised, containing two hundred and sixty-six engravings on wood. Philadelphia: Henry C. Lea's Son & Co. 1880.

The object of a review or book notice is chiefly to give to the reader some fair idea of the character and value of the work. When these are known, from the fact that the work has, by former editions, been before the Public, there is but little left for the reviewer to do than to call attention to the issue of another edition, and to note any peculiarities or facts of interest in regard to it. This work of Dr. Thomas is a medical classic. It is known to all physicians, and has been read by most of them. In twelve years five editions have appeared, this one being the fifth. The author has evidently expended great labor upon it. Evanescent views, theories, remedies, modes of treatment, etc., are not even mentioned, and the work is, therefore, most practical in value and standard in character. Nothing not proved to be good is accepted. The work has been translated into German, French, Italian and Spanish. It is claimed and admitted to be fully "abreast of the times," and this edition is certainly so superior to the last that even those who have the last are advised to procure this one. A valuable and entirely new chapter on extra-uterine pregnancy has been added. The index is very complete, and the work as a whole is a perpetual honor to the author and to his countrymen.

Fasting Girls: Their Physiology and Pathology. By WILLIAM A. HAMMOND, M.D., Professor of Diseases of the Mind and Nervous System in the Medical Department of the University of New York. Geo. P. Putnam's Sons. 1879.

This interesting brochure is worthy of an extensive circulation. In it the author has confined himself entirely to a demonstration of the absurdity of any human being having lived for the periods claimed by many. He has not attempted to refute the claims as to preternatural or supernatural gifts, because the limits of the volume rendered such a course impossible, and because the absurdity of such claims was too apparent to render their demonstration necessary. The general scope of the work may be judged from the following table of contents: Abstinence in the Middle Ages; Abstinence in Modern Times; Abstinence from Food, with Stigmatization; The Brooklyn Case (Mollie Fancher); The Physiology and Pathology of Inanition.

The subject of fasting—its limits and effects—is presented with great ability, and it is surprising that this volume has not been more generally read. No one who obtains a copy of it will fail to enjoy and to value it.

Hand-Book of Urinary Analysis; Chemical and Microscopical: For the use of Physicians and Medical Students. By FRANK M. DEEMS, M. D., Laboratory Instructor in the Medical Department of the University of New York. New York: Industrial Publication Co.

This Manual presents a plan for the systematic examination of urine, urinary deposits, and calculi. It is compiled with the intention of supplying a very concise guide, adapted for use both as a bed-side reference book and a work-table companion. The author has had for several years extended experience as a teacher of this branch of physical diagnosis. The arrangement of the matter, and the small though clear type in which it is printed, have enabled the author to compress a great deal into a very small compass, so that, while serving all the purposes of an analytical table, it is really a good deal more, although it is not, of course, to be supposed that such a brochure can take the place of larger books.

What to Do First. By CHARLES W DULLES, M.D., Surgical Registrar of the University of Pennsylvania. Philadelphia: Presley Blakiston. 1880.

When one reads the interrogatory implied in the title of this little volume, he is involuntarily tempted to give the advice which Mr. Dick gave to Miss Betsey Trotwood, on her asking "what to do" with the refractory David Copperfield: "Wash him!" Strange to say, the author does not give this advice either in regard to the first work to be done, or in regard to any of the subsequent labors of the professional adviser. This spirit of anti-Mohammedanism is surprising in a Hospital Registrar, and especially in a Philadelphia Hospital Registrar, who, like all of the citizens of that suburban community, must regard cleanliness as akin to godliness, and Philadelphia cleanliness as always equal, if not superior, to it.

It is to be supposed that most physicians know what to do in emergencies—in accidents or poisoning, etc.; but if not, they cannot obtain better or more concise information than is to be found in this little volume. If Mr. Dick's advice be incorporated in the next edition, the volume will be complete; and if it be adopted, a grievous stigma will be removed from the practice of Philadelphia hospitals, their Registrar and their medical staff.

North American Review. Buckle's explanation of the decline of the spirit of religious persecution, was that in modern times faith had undergone an eclipse, and men could not bring themselves to persecute others into believing that whereof they were themselves skeptical. The inadequateness of this explanation of one of the most striking social phenomena of our time, is forcibly shown in the *North American Review* for January, by Prof. John Fiske, who assigns a number of other causes that have been at least as influential in bringing about this most desirable result. First, there is the decline of the martial spirit and the greater devotion to pacific industrial pursuits. Then, as men rise in the scale of civilization, they are less disposed to be domineering. Finally, men in modern times have quite lost the sense of corporate responsibility—the belief that a whole community is liable for the offenses of each individual comprised in it. These points are established with all the ingenuity of reasoning and wealth of learning for which the author is so distinguished. The other articles in this number of the *Review* are: "Controlling Forces in American Politics," by Senator Geo. F. Edmunds; "Atheism in Colleges," by President John Bascom; "The Ruins of Central America," by Désiré Charnay; "Partisan Government," by William D. Le Sueur; "Popular Art-Education," by Prof. John F. Weir; "The Limitations of Sex," by Nina Morais; "The Mission of the Democratic Party," by Senator William A. Wallace; and finally, a review of Recent Philological Works, by Prof. F. A. March. The *Review* is sold by booksellers and newsdealers generally.

St. Nicholas for 1881. 5,000 for England, 100,000 for America.

St. Nicholas, the charming magazine for boys and girls, edited by Mrs. Mary Mapes Dodge, has increased so much in size and number of pages during the year past that the publishers have been obliged to issue the yearly volume in two parts, instead of one as heretofore. As to its circulation, they report a gain of 10,000 in the average monthly editions of 1880 over 1879. Regular price $3.00 a year; 25 cents a number. For sale, and subscriptions received, by all dealers, or the publishers, Scribner & Co., 743 Broadway, New York.

BOOKS AND PAMPHLETS RECEIVED.

Diagnosis and Treatment of Ear Diseases. By Albert H. Buck, M.D. William Wood & Co., New York, 1880.

Bryant's Practice of Surgery. By Thos. Bryant, F.R.C.S. Henry C. Lea's Son & Co., Philadelphia, 1881.

Differential Diagnosis. By F. de Havilland Hall, M.D. D. G. Brinton, Philadelphia, 1881.

Microscopical Technology. By Carl Seiler, Philadelphia, Pa. D. G. Brinton, 1881.

Minor Surgical Gynæcology. By Dr. Paul F. Mundé. Wm. Wood & Co., New York, 1880.

Practical and Analytical Chemistry. By Frank Clowes, D.Sc., London. F. C. S. Henry C. Lea's Son & Co., 1881.

A Treatise on the Principles and Practice of Medicine. By Austin Flint, M.D., Philadelphia. Henry C. Lea's Son & Co., 1881.

Rocky Mountain Health Resorts. By Ch. Dennison, A.M., M.D. Houghton Osgood & Co., Boston, Mass., 1881.

Twenty-eighth Annual Announcement Medical Department of the University of Vermont for the Year 1881.

The Third Annual Report of the Presbyterian Eye and Ear Charity Hospital, Baltimore, Md.

Transactions of the Medical Society of the State of Pennsylvania. Thirtieth Annual Session.

Proceedings of the Second Anniversary of the Abbeville Med. Society, Abbeville, S. C.

Cases Treated by the Lister Method. By Frederic Henry Gerrish, M.D.

Phthisis Pulmonalis and its Treatment, with Hypophosphites. By L. de Bremon, M.D., Paris, France.

Chronic Bright's Disease in Children Caused by Malaria. By Samuel C. Busey, M.D., District of Columbia.

Nervous Derangement—By W. A. Hammond, M. D. G. P. Putnam's Sons, New York, 1881.

Extensive Scalding from Prolonged Exposure to Steam at High Temperature. By Norman H. Chapman, M. D., M. S. Philadelphia, Pa., 1880.

The Treatment of Fracture of the Lower End of the Radius—By R. J. Levis, M. D. Phila., 1880.

La Primera Operacion de Ovariotomia En Caracas Ejecutada, por el Senor Doctor M. M. Ponte. Caracas, 1880.

The Asylums of Europe—By Geo. M. Beard, A.M., M.D. Cambridge, 1881.

Circulars of Information of the Bureau of Education ; No. 4, 1880.

Rural School Architecture, with illustrations. Washington, D. C., 1880.

Report of the Board of Health of the State of Louisiana, 1880. New Orleans.

Rand's Patent Sewer Gas Cremating Ventilator. 1880.

Hand-Book of Urinary Analysis. By Frank M. Deems, M.D. New York, 1880.

The Mountain-Movers ; or, So-called Modern Miracles—By Stephen H. Tyng, Jr., D.D. New York, 1880.

Ethylization—By R. J. Levis, M. D., Surgeon to Pennsylvania Hospital, etc. Philadelphia, 1881.

A Contribution to the Pathology of the Organ of Hearing—By Th. R. Pooley, M. D. New York, 1881.

Transactions of the Medical Society of West Virginia. Wheeling, 1880.

Notes on the Anatomical Relations of the Uterine Structures—By T. H. Buckler, M. D. Baltimore, Md., 1880.

On the Nomenclature and Classification of Diseases of the Skin—By J. D. Bulkley, M. D. New York, 1879.

Pathology of the Temporal Bone—By T. R. Pooley. New York, 1879.

Proceedings of the Second Anniversary of the Abbeville Medical Society. Abbeville C. H., S. C. July, 1880.

Health in Homes ; The Germicide : An Automatic Disinfector for Water Closets. The Germicide Co., New York, 1881.

Anæmia in Infancy and Early Childhood—By A. Jacobi. N. Y., 1881.

The Development of the Osseous Callus in Fractures of the Bones of Man and Animals—By Henry O. Marcy, A. M., M. D.

Speech of the Hon. James B. Beck, of Kentucky, before the Senate of the United States. Washington, 1880.

Arguments in Favor of Senate Bill No. 35, to Establish a State Board of Health and Vital Statistics, and Regulating the Practice of Medicine and Surgery. West Virginia, 1881.

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TRANSLATIONS.

"Ubi mel ibi apes."

Orange-Colored Suppuration. By PROF. VERNEUIL. *From the Archives Generales de Médecine, Dec 1, 1880.*

This complication of wounds is, in my opinion, very rare, as since its recognition I have seen but few examples of it.

Delore, a surgeon of Lyons, was, I believe, the first to describe this complication, although he says that Lebert had previously noticed this phenomenon in a case of pyæmia. In a very interesting inaugural thesis (published in 1854) on PUS he speaks (page 20) of the different hues of this liquid, and among others of the saffron or chrome-yellow color. He does not regard this phenomenon as rare, but the number of cases collected by him was not large enough to enable him to make a complete study of the question. He attributed a great value from a prognostic point of view to this phenomenon, more particularly regarding it as a preliminary indication or prelude of pyæmia. The eight cases coming under observation all terminated fatally from purulent infection, and the following is a brief resumé of the facts concerning them:

Case I.—A man of forty-five years sustained luxation of the foot, complicated by an opening of the tibio-tarsal articulation. Orange pus made its appearance, soon followed by pyæmia and death.

Case II.—Bruises of the lower extremity of the leg, gangrene of the wounded part, accompanied by orange pus, followed by pyæmia and death.

Case III.—Bruise of the arm, followed by orange pus, pyæmia and death.

Case IV.—Bruise of the lower part of the leg, followed by orange pus, pyæmia, death.

Case V.—Luxation of the shoulder, fracture of the right femur, penetrating woand of the tibio-tarsal articulation, followed by orange pus, pyæmia and death.

Case VI.—A young mason, eighteen years old, fractured his femur, portions of which issued from the wound, leading to resection, followed by orange pus, pyæmia and death.

Case VII.—Bruise of the hand, followed by orange pus, resulting in pyæmia and death subsequently.

Case VIII.—Compound fracture of the leg, followed by orange-colored pus, pyæmia and death.

During the following year (1855) Professor Zeis, of Dresden, read a communication to the Société de Biologie (*Zeis Bulletin*, Société de Biologie, 1855, page 148) on *the orange-colored filaments which are produced in certain recent wounds*, studying only the composition and nature of pus so colored, he was led to ask, without answering, the following questions:

First. What are the conditions which give rise to this orange-colored pus, is it only found at times or always present?

Second. Can any thing of advantage be drawn from this discovery of practical value, or is it purely of physiological value ?

Robin added to this communication researches of a similar nature.

Dr. Delore published in the *Gazette Medicale de Paris*, 1863, page 677-690, a note on blue pus. He there resumes his discussion of the various hues this fluid presents, and among them we find two more cases of orange pus.

Case I.—L., aged 27, received a contused wound of the internal aspect of the arm, resulting in an orange-colored suppuration, followed by pyæmia and death.

Case II.—A. G., aged thirty-eight years, bruised his hand between two wheels, resulting in a large wound of the dorsal aspect of the hand and forearm, followed by gangrene and sloughing, and accompanied with orange-colored suppuration, lasting till cicatrisation was established.

The existence of this singular complication of wounds is therefore established, but surgeons, perhaps because of its rarity, have paid but little attention to it and have made no clinical researches on the subject.

During 1870, when our hospitals were crowded with wounded, I observed in my turn the phenomenon in question, and can fully confirm the remarks of Delore relative to prognosis, for every patient, without exception, whose wounds gave vent to orange pus died.

At the same time Dr. Nepren, whose attention had been called to these cases, observed others, in the service of Dr. Perrin at Val de Grace, among officers, comparatively better situated as regards hygiene, two of which are as follows:

An officer was shot, sustaining a comminuted fracture of the lower end of the radius. The sixth day after the wound was received orange-colored pus made its appearance, and death rapidly ensued from pyæmia.

D., an officer, received an oblique wound of the lateral region of the abdomen and also another wound of the hand, accompanied by fracture of the fourth and fifth metacarpal bones. Orange-colored pus made its appearance on the fifth day, the patient, however, recovering.

In 1871, during the Commune, in the ambulance of the Magazins-Rénuis and at the Lariboisiére hospital I met with more than fifteen cases, not, however, fully recorded, almost all of whom died.

Since this time I have been of the opinion that orange-colored pus is generally encountered in wounds leading to a grave prognosis, either contused wounds, compound fractures or gun-shot wounds, and above all, in alcoholists. After the Commune, gunshot wounds became of less frequent occurrence, the number of alcoholists diminished, and I saw but few cases of orange-colored suppuration. In 1872 I received, at the Lariboisiere hospital, a man, thirty-five years old, slightly muscular, rather short, of a pitiful appearance, and diabetic for at least four years, who had a fracture of the left leg, accompanied with a perforation of the skin. The wound was covered with gold-beaters' skin and collodion, over which Scultet's wadded apparatus was applied. Eleven days thereafter the appearance of fever and some amount of pain required the removal of the apparatus. The fragments had not changed their relations, but in the lower third of the leg and ankle the epidermis was raised and detached as if by a fly blister, the subjacent dermis was whitish gray in places and evidently spachelated in part of its thickness. A very abundant sero-purulent liquid of a fine orange color bathed this surface and was absorbed by lower layers of the wadding. The following day this purulent fluid was replaced by an almost pure serous liquid. The patient slowly recovered. He had been very temperate, and from this I was led to conclude that alcoholism was not the only factor provoking or, at least, maintaining this particular coloration; but a single case of course was not of sufficient value, so I awaited further developments. In 1878 I was called to the country to see a patient who had some days previously fractured his leg by fall from a vehicle without contusion, but resulting in a compound fracture. The attendant physician, in view of the ocal accidents which had come on, thought an amputation necessary and sent for me in haste. I recognized the existence of a fracture of the leg, with a phlegmonous wound extending to the thigh, and gangrene of the lower part of the limb. This latter peculiarity surprised me, for in a young man well built and in good condition fractures of the leg without contusion never lead to gangrene. I first noticed in certain incisions made into the phlegmonous wound flocculi of hardened pus of an orange hue, which immediately led me to think of alcoholism or diabetes. The first hypothesis was soon discarded. The patient was in the habit of drinking much beer, but not to excess, for which reason I immediately proceeded to examine the urine, which was found to contain sugar in considerable quantity. To diabetes then was to be referred the gangrene and orange hued suppuration. But the etiological factors of this phenomenon were soon to increase. Between the cases seen in 1872 and 1878 among the diabetics I saw a third case in 1873. It occurred to a patient attacked by violent neuralgia, which had lasted several years and defied all medication. To relieve his sufferings the patient habitually used about two grains of chlor-hydrate of morphia per diem. I resected the radial nerve and applied the wadding. The neuralgic pains continuing, the large doses of morphia were continued. On the third the fever and local symptoms led me to remove the apparatus. The arm was affected with the serious bronze form of erysipelas, and from the wound made by the operation escaped a considerable amount of orange-colored pus. The patient died two days later from exhaustion· I was called some months later in the city to a new case of fracture of the leg, complicated by a wound running backwards caused by the sharp point of the upper fragment. At thispoint the skin was gangrenous for some tenths of an inch. The rest of the member was in good condition. Around the eschar and on the wound were specks of orange-colored pus. The patient was neither an alcoholist nor a diabetic. The urine had, however, much sediment. The patient had long been a dyspeptic and was suffering from a very obvious cerebral affection. I endeavored to ascertain the quantity of phosphates, and rightly so, for we found considerable phosphaturia, which, after the cure of the fracture, has shown several relapses. It was at this stage that three new examples of orange pus presented themselves.

M. Mason, aged 34, tall and robust, was brought to La Pitié January 8th, badly wounded by a railroad train. The two limbs were badly comminuted toward the inferior third, a gaseous infiltration extending to the knee. The left buttock was badly contused and distended by a very considerable subcutaneous sanguineous effusion. The patient was in a stupor, his pulse could hardly be felt, and the thermometer stood at 95°. Some hypodermics of ether brought on some reäction, the temperature, however, only rising to 97.5°, and further attempts were deemed useless. At my morning visit, January 9th, I recognized where the chief trouble lay, and, although success seemed impossible, decided on a double amputation of the leg at the lower fourth. The patient, who had come to himself, complained only of his buttocks, and scarcely seemed to notice his legs. He was calm and even indifferent. I learned from people who were acquainted with him that he had been a great drinker, which was easily seen by the difficulty with which he was anæsthetized and the atheromatous arteries found on amputation. The two amputations were made at a place where the tissues were contused at several points. And for this reason I used the open antiseptic dressing. The temperature had risen to 100.4°, a fact explained by the fœtid odor proceeding from the wounds. In the evening it had fallen to 100°. On January 10th the stumps presented a good appearance, but the condition of the buttock was aggravated. On the upper point of the sanguinolent protuberance was an opening giving vent to a fœtid, bloody liquid. There was much pain, and the temperature had risen to 102°. I used at this point repeated applications of carbolised compresses. January 11th the patient passed a bad night; he was much agitated and had violent delirium, having a tendency to end in delirium tremens. In the morning he regained consciousness and complained bitterly of his buttocks. It was found that the scar was extending; that it was surrounded by skin having a bronzed erysipelatous appearance, and that in the cavity there was much gas. I proceeded then to remove a large flake of gangrenous skin, and made a series of punctures a short distance apart with the thermo-cautery to permit the pus and gas to escape easily. From the central opening there escaped with the fœtid and purulent liquid some flakes of orange-colored pus. The stumps were indolent, but the wounds had a bad appearance; the surface was grayish, and on the left side there were to be seen flakes of orange pus. The opening of the buttock led to relief from pain, but did not improve the patient's general condition. The temperature reaching and remaining at 104°. The patient died the next day, but no autopsy could be obtained. The The second case also occurred in an alcoholist.

Case.—A man about 55, of thin, pitiful appearance, but claimed to enjoy good health, and admitted without hesitation his penchant for alcoholic beverages, of which avowal there was not much need, as the color of his face, his red nose, hesitant speech, uncertain look, trembling hands, and the recklessness with which he viewed the accident, were pretty good evidences of dipsomania. A carriage had upset him in the street, and the wheel passed over the lower end of the leg, fracturing the two bones and making a large open wound over the internal malleolus, beside violently contusing the dorsal surface of the foot. After having washed the limb and wound we applied the wad dressing. At the tenth day the temperature had risen slightly and the patient complained of pain. The dressing was raised. We then saw at the internal side the malleolus wound filled with orange pus of a very intense hue. The contused integument of the foot was gangrenous and the border of this was colored in the same way. To follow the progress of the complication, I placed the limb in a dropper and began the open antiseptic dressing. At the end of ten days the abnormal coloration of pus had ceased, and the patient recovered slowly, but without further complication.

The next case shows the combination of orange pus and phosphaturia.

Case.—Anna F., dressmaker, aged thirty-four years, was brought to La Pitié February 22nd. She had fallen from the second story, head foremost, and had a large wound in form of a cross involving the scalp in its entire thickness, but not denuding the bone. The borders of wound are separated at least half an inch, the upper lip being at the same time much bruised. The edges could not be brought together, and we were forced to remain content with the open antiseptic dressing.

February 25. Surprised to see the wound bathed in its entire extent by orange-colored pus, without any appearance of gangrene or inflammation I endeavored to ascertain the causes of this phenomenon.

F., although a little frail in appearance, had hitherto enjoyed very good health. She had never had any acute disease other than a slight pleurisy. She was not laboring under any diathesis, and gave only the history of an illy defined cerebral affection, which lasted but a few months and then disappeared of itself. Her digestion was good, but she complained of a rather extreme thirst, which made its appearance at intervals, most pronounced at the menstrual period. The urine was collected, and I found it to be clear, pale colored, and amounting to at least four and a quarter pounds per diem. It contained neither sugar nor albumen, but on further examination a proportion of phosphoric acid, indicating the elimination of more than a drachm and a quarter of phosphoric acid per diem, was found. A rather considerable quantity for a pretty feeble woman at rest, and under a meager alimentary regimen. In the absence of diabetes and alcoholism, and having recognized the manifest polyuria, with increased elimination of phosphoric acid, I did not hesitate to attribute the abnormal color of the pus to the phosphaturia. As it was, without change of dressing, without the wound showing any troublesome feature, without the general health at all suffering, the orange-colored pus disappeared five days later without any appearance of returning. Cicatrisation, however, made but slow progress. The wound generally was pretty well healed when a collection of pus gradually accumulated near the bruised lower lip, and had to be opened. Early in April recovery was complete, and a new analysis of the urine was made. It presented the same limpid character, but had reached the considerable quantity of six pounds per diem, containing about two drachms of phosphoric acid. Phosphaturia then persisted, but the patient had recovered and was in very good health, quitting the hospital April tenth.

On two occasions since have I seen wounds exuding orange-colored pus, but in so small a quantity and for such a short period that I did not think it necessary to take a full history of the cases. In a patient at present under my charge for treatment of a grave compound fracture of the leg, I perceived one morning, quite a while after the accident, on the edges of the contused wound corresponding to the fracture a flake of orange-colored pus about a fifth of an inch in diameter. I postponed till the following morning the examination of this pus, but when the following morning came suppuration had resumed, its normal characters and these it since retains. The patient, although of advanced age, was of a good constitution, had not succumbed to grave local accidents, which proved that his internal organs were in good condition. I have not been able to explain to myself the reasons for the appearance of orange-colored pus in this case.

Such are the facts coming under my observation, although not very numerous, they have appeared to me worthy the attention of clinicists and sufficient for asking, if not answering, certain questions of etiology and pathogeny. But above all, it would not be useless to recall what orange-colored pus is and to what the coloration in question is due.

Delore, who, in 1854, vainly attempted to isolate the saffron coloring matter, explained its formation thus: "Hæmatine, like all organic substances, changes its character and is eliminated. The liver rejects it having a brownish green color, the kidneys having an amber hue. Suppurating wounds have analogous function to the liver and kidney. What is a wound but an organized pathological surface, the capillaries of which, deprived of their protecting envelope, allow to transude certain constituents of the blood which passes through them. The altered hæmatine finds there an easy issue, as in the case of serous exudations, etc. The more or less yellowish coloration of this liquid results either from hæmphéine of Simon or to the disorganisation of hæmatine according to Polli, or to an isomeric catalysis of the body. I will not lay stress on these suppositions, but the fact remains, says Dr. Delore in conclusion.

Zeis, of Dresden, in his note to the *Société de Biologie*, claims to have recognized in orange-colored pus the presence of crystals, of hæmatoidin crystals of a not constant character, pus globules and fat drops colored by an unorganized orange substance derived from hæmatoidin.

Prof. Rotin, who has made the most complete historic chemical researches on this subject, gives the following description in his *Treatise on the humors:* "The flakes found in pus are formed by the detritus of voluntary muscular fibres, elastic tissue and adipose tissue, sometimes all mixed together. Hæmatine in process of alteration is often found in it. The coloration is due to the presence of a great quantity of hæmatine or disintegrating hæmatoidin. These filaments, about a tenth of an inch in length and a third to two-thirds in breadth, are made up of a few fibres of connective tissue, some fibres of elastic tissue, all forming a sort of work, filled with amorphous matter swollen by water, among which very numerous molecular granules are mingled. This amorphous matter is generally of a yellowish red or pale orange color. Often there are found in the centre or on the edges floculent filaments of adipose tissue, or drops of free oil, or large oily drops or blood globules, either intact or becoming irregular. These peculiarities indicate that the substance even of these filaments is formed by portions of adipose aponeurotic connective tissue, which is detached by eliminative mortification originating in the inflammatory process which precedes or accompanies the suppuration of wounds.

The orange color of these filaments is the result—First, of the presence of needle or rhomboidal shaped crystals of a reddish purple or bright reddish orange color, which are the manifestations of hæmatoidin. Secondly, of the presence of amorphous coloring matter or a liquid which gives a pale red tint to the granular amorphous material of the flakes. This last coloring matter appears to be hæmatoidin separated from the red blood corpuscles destroyed during the eliminative process which has taken place at the surface of some wounds after some slight capillary hæmorrhages.

Nephren, chief of the Pitié laboratory, has also examined this pus and has observed the irregular immobile granulation very small and of a yellowish crystalline appearance in great abundance, and a few yellowish needle shaped crystals. This matter colored a few leucocytes bright yellow, but bacteria were not affected by it. Nephren also thinks that the orange color originates from the hæmatine of the blood.

I can add relative to orange colored suppuration an observation certainly not without interest. Our late lamented Broca having occasionally observed this phenomenon, thought at first it was related to blue suppuration. He instituted with the two kinds of pus experiments in cultivation, which resulted perfectly in the second case, but failed in the first. Broca therefore rejected all idea of the parasitic nature of orange-colored pus. I have from his own mouth these researches, left unedited. If the chemical and histological ideas we have about orange-colored pus are not very complete, still we have some slight idea as to the circumstance which preside at the appearance of this phenomenon, and its signification.

Delore, in 1854, has seen orange colored suppuration follow contusions of the extremities and wounds of the articulations, all of which cases terminated in pyæmia. He concludes that this coloration of pus is the indication and prelude to purulent infection. As to its immediate cause he has nothing to offer.

Zeis, of Dresden, in 1855, asked the clinical questions already given, but made no deductions. Robin has studied only the anatomical part, the pathological is yet to be investigated. The cause and mode of origin are peculiarly obscure.

Evidently the coloring matter comes from the blood, and not from the foreign matter afterward mingled with it. On seeing these cases appear so rapidly during the contests of the Commune, I at first thought myself in presence of an epidemic, but microscopic examination having revealed the physical causes of the orange hue, I abandoned this hypothesis. I have elsewhere alluded to Broca's experiments in respect to orange-colored pus.

There remain then the wound and the constitutional condition of the patient. In the earlier cases observed by Delore and in those first noticed by myself orange-colored pus appeared almost exclusively in case of contused wounds complicating fractures. There seemed, therefore, reason to believe that the medullary tissue played a certain role in the production of orange-colored pus, but later on Delore himself found the same color of pus to occur in a simple contused wound of the internal aspect of the arm.

In the case of A. F. it resulted from a contused wound of the hair scalp; and in the case of the man, from an abscess of the buttocks. If, then, the co-existence of a fracture be not indispensable to the production of orange-colored pus, it may readily be believed that it occurs only in contused wounds, in other terms (since the mode of production of a wound does not bestow on it any specific characters), only in wounds complicated by gangrene. In point of fact, I have several times seen the sloughs adherent by orange colored flakes, and so to speak, impregnated with this hue. Until the present, I have never seen orange-colored pus appear before the third or fourth day, and it never appears later in a wound well washed with antiseptics. I have also found that the phenomenon was, as a rule, temporary in character, and was only persistent in certain grave cases seen in 1871, or where the wounds did not cease to be phlegmonous and to present an unhealthy appearance. These facts added to the circumstance that I have never seen orange-colored suppuration follow an operation or a wound made by a sharp instrument, lead me temporarily to conclude that there was a special relation between gangrene and the orange color of the pus, and that the first condition was in some sort the cause of the second. I was forced to modify in some respects this conclusion by some very convincing facts; first, the case of resection of the radial nerve, then the case of the mason. The latter patient had three wounds, the contusion of the buttocks and the compound fractures of the leg; now, orange-colored pus appeared both in the contusion and on the stump after amputation. It is, however, only just to add that it was at the fourth day and the wound was not washed out antiseptically, it having in addition by reason of the bad general condition, a rather unhealthy appearance.

In admitting as demonstrated that compound fractures, contused wounds, and superficial gangrene constitute the principal local predispositions to the production of orange-colored pus, the fact that the phenomenon has so long not been perceived, and is now observed so rarely, while its predisposing causes are so comparatively frequent, requires explanation. This circumstance alone would lead us to search for other causes which, added to the preceding, are capable of giving rise to this exceptional complication. Now, can these causes be found in the patient's general constitutional condition? Zeis is mute on this point. Delore and Robin do not raise this question.

Encountering in 1871 this orange-colored pus among patients drawn from the defenders of the Commune, given for the most part from ancient or recent date to the abuse of fermented liquors, I suspected that alcoholism played an exclusive part in the production of this phenomenon; but while this hypothesis was too sweeping, I have never failed to find a preëxistent dyscrasia in every case I have personally examined. I would not be surprised to find that the same thing in a nephritic or hepatic case, from which it would appear that this special alteration results from the association of a certain class of wounds with a certain constitutional state. The necessity of a double order of pathogenic influences explains very readily the rarity of the phenomenon.

I cannot explain beyond this why and how the blood of certain patients deposits crystals of hæmatoidin and gives it a more or less modified coloring matter, or why and how the mortification of tissues and the communication of a traumatic focus of morbid action with air or the presence in this focus of bony fragments favor this chemical change.

As to the relations between orange-colored pus and pyæmia, admitted by Delore and recognized by myself, it appears to me less close than is believed by my colleague, and I see in it merely a coincidence, which will become rarer and rarer as pyæmia tends to disappear from our hospitals. The fact that I have latterly observed that cases where orange pus has appeared have either recovered or died without purulent affection, lends strength to this view. Now had some of them (the two compound fractures of the leg) occurred before antiseptic times and at periods when pyæmia was endemic in the hospitals, they would have died from metastatic abscess.

Altogether, the appearance of orange colored pus at the surface of a wound without entailing a fatal prognosis should always be a matter of some anxiety to the surgeon, denoting as it does the existence of a constitutional dyscrasia, having an influence on surgical prognosis. I have little to say as to treatment. It can be only a question of prophylaxis for such a rare and unforeseeable complication. When orange pus is found, the wound should be promptly washed out antiseptically, and in addition the exact state of the general health should be ascertained and the dyscrasia treated by appropriate remedies.

CHEMISTRY.

"Diruit ædificat, mutat."—Hor.

ANTAGONISM IN THERAPEUTICS.—Translated from *Le Concours Medicale.* By a Lady of New York.

The question of antagonism in Therapeutics has up to the present time been studied generally from a scientific point of view rather than from a practical one. It is certain, however, that the medical practitioner should have precise ideas in regard to this subject.

Dr. Leblanc, a pupil of Professor Gubler has just made an attempt to supply the need which has hitherto existed in this respect, in a recent article written for the *Journale de Therapeutique.* We will analyse this work of his and venture to add several details.

We can attribute many errors and easily averted mishaps to a variety of absolutely antagonistic substances contained in a prescription. Moreover, the plan of writing complex prescriptions is undergoing daily modification. This we occasionally attribute to ignorance on the part of the physician in regard to the art of prescribing. We admit that we are not over fond of those long prescriptions in which the physician seems to take pleasure in writing frequently the most incongruous substances. It is easy to understand that the druggist who puts them up may often imagine that the medical man who does not form his potion of a certain number of reasonable ingredients, does not know how to prescribe. This art, in fact, is gradually assuming a tendency to become entirely lost, simply because the physician is somewhat better acquainted with the physiological properties of medicines.

If certain associations command the attention of therapeutists it is because the action of the ingredients is not antagonistic but synergetic.

We do not pretend to say, however, that complex prescriptions will be completely abandoned. Far from that: but we do assert that their use will diminish and their composition change as we obtain more complete knowledge of the properties of medicines. It is in this respect that Dr. Leblanc's article is of great practical importance.

Opium. Sometimes in a single potion we find opium or morphine associated with digitalis, colchicum, Peruvian bark, quinine, kermes, ipecac, tartar stibium, and even with certain purgatives.

Let us glance for a moment at the effects of opium. It diminishes the absorbing function of the digestive mucous membrane; dries up the salivary, gastric, intestinal and urinary secretion etc., decreases the nutritive activity, causes congestion of the cephalic extremity and the entire cutaneous periphery, the capillaries of which dilate simultaneously as the sudorific secretion augments, thereby increasing the frequency and fulness of the pulse.

Digitalis has an opposite effect upon the circulation. It retards the pulse which becomes more resisting, the capillaries contract, the urinary secretion augments, and when heavy doses are given, we preceive hyperæmia in most of the glands frequently producing salivation, nausea and vomiting.

Let us conclude therefore with M. Leblanc that the association of opium with digitalis will be formally contra-indicated when we propose to obtain from the latter either tonic or antiphologistic effects of the circulation, or else diuretic effects.

Do any cases exist in which the associations of digitalis with opium is indicated? When patients are predisposed to cerebral hyperæmia we can unite digitalis with opium in order to avoid the hyperæmic effects produced by opium upon the brain.

But there is something better still. It is infinitely preferable to associate bromide of potassium with the opium. The difference between bromide and digitalis consists principally in the fact that the latter exercises a direct action upon the heart, thus producing an increase of the vascular tension, while the bromide on the contrary only acts upon the capillaries, constricting their calibre by the intermediation of the vaso-motors. It is easy therefore to see the advantage of substituting bromide for digitalis in such cases, the more so as the hypnotic effects of the opium are in no wise diminished by the association.

The association of colchicum and varatrine, etc., is no better justified. "If we administer these two agents concurrently in equivalent doses we expose ourselves," says Gubler, "to seeing them neutralize each other in the most apparent manner."

We find many preparations in which colchicum is associated with opium. Wine of colchicum opiated, and numberless pills preventive of gout. In this respect we may invoke the authority of M. Bouchardat who affirms that it has generally become the custom to replace the opium by sulphate of quinine in the preparation of these various pills.

There are certain cases, however, in which colchicum is badly borne. Patients frequently vomit it almost immediately. Then, small doses of opium given with the intention of calming the susceptibility of the stomach may prove to be very serviceable. "The general effect of opium and of diffusible stimulants" says Gubler again, "is contrary to that of colchicum, but this does not mean that a small dose of opium *previously injected* in order to dull the sensibility of the gastric mucous membrane, should not favor the effects of the colchicum by assuring its absorption."

The antagonism of opium and Peruvian bark is established by the fact that opium poisoning is advantageously contested by quinine. "The pharmacodynamic action of sulphate of quinine," says Gubler, "seems entirely opposed to that of opium, and experience, in regard to this theory, proves the reality of this antagonism."

"We cannot too greatly condemn," says M. Leblanc, "a physician who endeavors to calm paludal neuralgia by means of a hypodermic injection of morphine *in loco dolente*, while at the same time he seeks to ward off the malarial influence by quinine given inwardly."

We very often see opium and the extract of Peruvian bark associated in a potion. The latter is administered by way of a tonic, to stimulate the appetite, to moderate the febriculi which may be more or less intense, etc. Opium, on the contrary produces a saburral condition of the principal canals, diminishes the appetite and brings on a kind of artificial fever often very pronounced.

A more important subject and one resulting in much graver consequences is also spoken of by M. Leblanc. It treats of vomiting and of antimonials in particular.

"I do not hesitate to declare at once," says M. Leblanc, "that I am by no means a partisan of tolerance and I do not think we are ever obliged to seek it, for this would be equivalent to asking a medicine to produce therapeutic effects without exercising any physiological action, by whose intermediary alone it is likely to act upon the living organization. I think that tartar stibium, kermes, and divers antimonial preparations have a tendency to provoke the glandular secretions of the digestive and bronchial mucous, by producing, nausea and vomiting the immediate consequences of which are a rejection of the matter contained in the stomach and the bronchial mucous, while the more removed consequences are a diminution of the fever by spoliation which produces abundant vomiting, general depression, languor and sudation, which are, so to speak, critical.

In regard to a direct antiphlogistic power whose curative properties are exercised in proportion as the stomach is more or less affected and disturbed, I do not think it should be tolerated. Let us therefore, do away with large doses of tartar stibium which weakens the patient and produces alvine evacuations without vomiting, because it is not strong enough for the latter, and let us also banish all association of the same agent or its species (kermes, white oxide of antimony, etc.), with any preparation of opium given with the intention of making them tolerated, or else for the purpose of obtaining the two actions in their integrity simultaneously.

If we no not desire to produce vomiting but simply to keep the patient in a nauseated condition which is so favorable in affections of the lungs and bronchial tubes, it is better to administer very small doses of tartar stibium, 1 or 2 centigrammes for instance, in a potion consisting of 100 grammes, this to be given by the teasponful, instead of neutralizing the effects of a stronger dose by means of a variable quantity of opium. If however, it should be deemed advisable to administer the latter in order to produce calm and quiet, the doses of tartar stibium should be momentarily suspended.

Nevertheless, (it will be objected,) certain complex medicines such as Dover's powder for example, combine opium and ipecacuanha.

That is true, but this preparation properly estimated is essentially calming and sudorific. Ipecac is not intended to cause either vomiting or nausea, but merely to favor the perspiration.

This has also been said in regard to the antagonism existing between belladonna and opium, atropia and morphine. Béhier has often insisted upon the contrary effects of these two substances and has published several papers upon the subject. Trousseau and Pidoux also sustain this theory of antagonism. They state that belladonna stops the narcotic effect and reciprocally, that opium causes the intoxicating symptoms of the belladonna to cease entirely. They say, moreover, that in case the doses are not particulary heavy, the economy is perfectly indifferent to the action of atropia and morphine mixed together.

Gubler, on the contrary, places opium among the synergetics of belladonna. "Opium," he says, "although it has other means of reaching this end, unites its stupefying action with that of the belladonna. In fact, and apart from all theoretical speculation, the sedative effects of opium and belladonna *superpose* and often complete each other : poisonous doses of one do not always succeed in neutralizing the dominant symptoms of the other."

Gubler admits that if the administration of belladonna does not prevent the death of a person poisoned by opium, this is owing to the fact that the opposite actions of the two agents are not evenly balanced, one of them bringing its principal effort to bear upon one point and the other upon another point, and the definite results partially uniting instead of becoming annulled would only produce two equal quantities preceeded by contrary symptoms.

Frazer and Benett have made very interesting experiments in the name of the British Medical Association, and they affirm, that, in regard to poisoning, morphine and atropia are far from counter balancing each other, and unite their powers.

Moreover, the observations made by Gros, Fourcault and Bliver, have shown us that it is advantageous in certain cases to make use of atropia and morphine in a hypodermic injection.

Here is a prescription of which M. Dujardin-Beaumetz frequently makes use :

Chlorhydrate of Morphine, 10 Centigrammes ; Neutral Sulphate of Atropia, 1 Centigramme ; Laurel Water, 20 grammes.

One gramme of this solution contains half a centigramme of morphine and one half milligramme of atropia.

On the contrary, the antagonism of atropia and calabar bean or eserine, is one of the most perfect science can boast of. It is a veritable type resulting from Thomas Fraser's experiments, and these substances should never be associated in the practice of medicine. This recommendation is however purely platonic, inasmuch as these agents are only employed with the uttermost circumspection, and no physician, however rash and blundering would be tempted to experiment with them together, a proceeding which comes entirely under the domain of the laboratory.

We can say as much also in regard to eserine and henbane. These examples could be multiplied *ad infinitum* : for instance we could mention the antagonism of alcohol and strychnine, chloral and strychnine, and picrotoxine of opium, hemlock, hashish, ether and chloroform, with these latter agents ; but we repeat, that our intention has not been to make a complete study of these questions in the course of these few lines, but merely to call forth the reflection and attention of practitioners in regard to them.

However, we cannot refrain from mentioning a prescription which has lately come to our knowledge and which appeared to us to be eminently inadequate. It treats of a case of chorea, and the physician in attendance knowing the efficacy of bromide of potassium in regard to this affection and likewise remembering the favorable results obtained by Trousseau with sulphate of strychnine, found nothing better to do than to associate the two medicines in a potion. The result was an abominable mixture which the most docile child in the world could not be reconciled to accept, followed by a total absence of satisfactory effects, from which we must conclude in comfirmation of one theory, that the action of these agents must be reciprocally opposite, one augmenting the excito-motor force of the spinal cord and the other reducing it.

A thorough knowledge of the antagonistic effects of medicines has therefore a practical importance of the first order. Let us quote in reference to this, the antagonism of anæsthetics and emetics. M. Chouppe (*Gazette Hebdomadaire*, 1875,) has reported the case of a man who had been poisoned by a heavy dose of chloral ; he administered through the mouth 0 gr. 05 of tartar stibium, with little hope nevertheless of making him vomit, but thinking prehaps it might prove of use. The tartar stibium produced no effect whatever, except a slight diarrhœa on the following day.

The practitioner should remember that he cannot count upon vomiting in cases of poisoning by anæsthetics.

SIMPLE ELIXIR.—As very many physicians are unable to command the services of a skilled pharmaceutist, and yet desire to furnish their patients with acceptable medicinal preparations, the elixirs made by the rule of the American Pharmaceutical Association and, according to the following methods, will be found highty useful:

Simple Elixir.

℞ Spirits of Orange, . ℥ iss.
Alcohol, . . . ℥ iv.
Cinnamon Water, . ℥ vi.
Simple Syrup, . . ℥ vi.
Mix and filter through paper.

Red Elixir.

℞ Com. Tinct. of Cochineal, ℥ ss.
Simple Elixir, . . ℥ xvss.
Mix.

Elixir Valerianate of Ammonia.

℞ Red Elixir, . . ℥ xvi.
Valerianate Ammonia, grs. 256

Elixir Valerianate of Ammonia with Quinine.

℞ Elixir Valerianate of Ammonia. . . ℥ xvi.
Sulphate of Quinine, grs. 128.
Mix.

Elixir of Bismuth

℞ Citrate of Bismuth and Ammonium,	grs. 256
Distilled Water,	℥ iv.
Water of Ammonia,	q. s.
Simple Elixir sufficient to make,	℥ xvj.

Dissolve the Bismuth in the water with the aid of the Water of Ammonia and then mix with simple elixir.

Elixir Bromide of Potassium.

℞ Pot. Brom,	grs. 640
Red Elixir,	℥ xvi.

Triturate and filter.

Elixir Calisaya.

℞ Tinct. Cinchonia, U.S.P. ʒ xxij.

Simple Elixir sufficient to make 16 fluid ounces.

Elixir Calisaya with Iron.

℞ Elixir Calisaya,	℥ xv.
Citrate of Iron and Ammonium,	grs. 128.
Distilled Water,	℥ i.

Dissolve the iron salt in the water, add the elixir and filter.

Elixir of Pyrophosphate of Iron, Quinine and Strychnia.

℞ Sulphate of Quinine,	ʒ j.
Strychnia,	gr.j.
Citric Acid,	grs.v.
Alcohol,	℥ iij.
Spirit of Orange,	gtt. 80.
Simple Syrup warmed to 150 F°,	℥ vj.
Pyrophosphate of Iron,	grs.240.
Distilled Water,	℥ vij.
Water of Ammonia,	q. s.

Triturate the quinia, strychnia and citric acid together, add the alcohol, spirit of orange and syrup. Dissolve the iron in the water; neutralize with the water of Ammonia and add.

Elixir of Pepsin.

℞ Scheffer's Pepsin,	grs. 256
Sherry Wine,	℥ xiv.
Simple Syrup,	℥ ij.
Fluid Ext. Ginger,	gtt. xxv.

Dissolve pepsin in wine; add syrup and ginger; mix and filter.

NOTE.—Other useful formulas will be given in future numbers.

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

STARTLING ACTS IN SYGGNOSTICISM —*Manifestations of an extraordinary kind produced by Dr. W. A. Hammond.* —The large lecture-room at the University Medical School, No. 410 East Twenty-sixth Street was crowded to its utmost capacity yesterday afternoon. It had been bruited in the medical colleges that Dr. William A. Hammond would perform mesmeric experiments. Behind the railing sat two young men who have figured frequently in such exhibitions. That both were neurotic patients was evident at a glance. In addition, there were several animals waiting to be experimented upon. Of all animals, the frog is most susceptible to the condition of hypnotic slumber: but a basket of very lively crabs will answer the purpose if frogs are not procurable. "I merely seize the annimals," said Dr. Hammond, suiting the action to the word, "by the posterior fins, to avoid being nipped by them, and stand them upon their heads, where they remain supported in part by their claws and legs. To mystify spectators, I sometimes stroke them gently down their backs, but that is not necessary in order to produce the nervous revulsion. Having stood a dozen crabs on their heads, one may cut off their claws with scissors without breaking the condition of insensibility; but if you tap them gently on the back with the finger-tip, thus, they will wake up and scamper away as lively as ever. And, with the frog, one may slit open the body from one extreme to the other without eliciting the least indications of sensibility. With some animals, particularly with pigeons and hens, a piece of glass or something bright to gaze at, held directly before the eyes, appears to be the most efficient means of producing artificial slumber. "When in this condition the hen's head can be pressed down or raised up," said the lecturer, turning the table and lifting the head of the sleeping animal, "and it remains exactly in the position in which you place it—a fact which shows an analogy between hypnotism and catalepsy."

Dr. Hammond believes that the spinal column and the automatic centres of the brain (exclusive of the convolutions in which conscious and voluntary actions are originated) are alone concerned in the phenomena of hypnotism, and he has invented a new name for the condition, "Syggnosticism," which expresses the fact that actions performed in hypnotic trance are always suggested by some other person. "I might," he said, "tell either of these young men whom I shall presently put in this condition to commit murder, to stab any person I should designate to the heart, and he would execute the order, without any sense of responsibility, or recollection of the act after he was awakened from slumber." Having disposed of the experiments with the lower animals, the stout youth, with the powerful shoulders, was directed by Dr. Hammond to fix his eyes intently upon a piece of glass which the Professor held daintily between his fingers. Two or three minutes passed, during which one might have heard the dropping of a pin. The eyes becamed fixed and set, the breath came in quick gasps, the expression on the face grew eager and excited, then suddently placid and sleepy. At the expiration of about four minutes the subject was standing motionless with his eyes wide open, perfectly under the control of the operator. What Dr. Hammond first sought to show after obtaining possession of the nervous system of his subject was that while sensation in the proper sense of the term is not abolished in the condition of syggnosticism, there is no such thing as perception. "Here," he said to the young man, "is the finest strawberry of the season just from Florida," handing him, as he spoke, a quarter of a lemon, which the somnambulist put in his mouth and masticated with the highest apparant relish. "What is it?" asked the Doctor after the last particle had disappeared, and the patient was waiting anxiously for another. "Why it is just the finest strawberry I have ever eaten," replied the young fellow; "I didn't know they raised such strawberries in Florida." The tears were running from his eyes with the biting action of citric acid upon the nerves of the taste, a fact which the lecturer interpreted as showing that there is perfect sensation in these cases, but no consciousness of the fact on the part of the abolished intellect. To test the same question respecting the sense of smell, Dr. Hammond placed a pungent liquid at the nostrils. Not a movement betrayed the presence of a vapor that under ordinary conditions would have caused a sudden backward fall of the head and terrible contortions of the facial muscles. But tears flowed freely from the eyes. Recurring again to the sense of taste, Dr. Hammond offered the young man another Florida strawberry, being a bit of bread satuated with extract of bitter almonds, nauseous enough to disgust an alligator. He wept freely, but declared that the second strawberry was even more delicious than the first. A moment later the lecturer lifted a fold of skin on the back of the hand and passed a delicate needle through it, telling his victim, in forcible terms, that there was no feeling at that point. It was patent to all present that he did not feel any pain, for not the slightest shrinking movement betrayed it.

"And now," said Dr. Hammond, "you are a colored clergyman, and these are your colored brethren and sisters." The young man stepped to the front of the platform. "My colored friends," he began, and followed with a jargon of mixed metaphors that would have defied the capacity of a stenographer to report. He had proceeded for several minutes in this strain when the operator interrupted his rigmarole with, "There is a colored lady sitting there," (pointing to a young medical student in a front seat), "who says you are no minister at all, and she won't come to hear you any more." "Madame, I am sorry for you," spoke the minister sadly, turning to the imaginary woman; "and I hope you may feel the workings of divine grace in your soul before you leave this house." Then, turning to the congregation: "I trust some devoted brother or sister will reason with this sinful woman, and bring her to a better mind." He was about to continue his sermon after this episode, when he was informed that he was enamored of a very pretty colored girl sitting in a front seat, and told to offer her his arm. Walking up to a medical student —there was not a lady in the room, of course—the young man bowed, and offered his arm. "Shall I have the pleasure of seeing you home?" he asked in the blandest tones. "Ask the young lady to marry you," said the operator. "Will you marry me?" he inquired, tenderly, of the student, who blushed to his eyes, while the crowd roared with laughter. Upon being told that the woman was 75 years old, the lover retreated in horror. He was told that a bit of paper the Professor held in his hand was a beautiful bird, and began to croon in a low tone: "Tira lalala lala; tira lalala la," in imitation of the notes of a wood bird, rushing to and fro after it with the impetuosity of a boy running after a butterfly. He was next called the Count Johannes, and recited Macbeth's address to the dagger with effect. While he was in the midst of a lecture on the wonders of electricity, his fellow-subject, transformed into a terrier dog, was hunting a rat up and down the platform, under the table, and so on, in every nook and corner. The noise was terrific—deafening. Tables were overturned, settees dragged from their places, and the rickety railing creaked. But the orator went on regardless of the din until he was informed that a flash of lightning was about to strike him. "You see," he cried, gazing at the ceiling with upturned eyes, "the majesty of this wonderful force of nature. The thunderbolt"—"There," cried Professor Hammond, "the bolt has struck you; you are a dead man." With a pale face the young man sank to the floor, and lay at full length, rigid as a cataleptic, without a sign of respiration. In the meantime the other young man was rubbing his leg where it had been bitten by an imaginary rat, and whining piteously like a dog.—*Times*, Jan. 28th.

"THAT LASS O' LOWRIE," is written by the wife of Dr. S. M. Burnett, the eminent oculist and teacher.

THE INACCURACY OF CLINICAL THERMOMETERS.—*A Card to the Medical profession from the Winchester Observatory of Yale College.*—The competition of business, coupled with the entire absence up to this time of any large observatory in this country paying special attention to the thermometry, to which authoritative appeal could be made, has so affected the manufacture of thermometers for medical purposes, that it seems necessary to issue a card briefly indicating the errors commonly found to exist, and to explain why, in this case, the representations of the dealers may be at fault, through the want of a proper understanding of the subtle errors to which medical thermometers are liable.

Too great a desire to economize time, good material, and skilled labor has led, in the making of thermometers, to the following faults: 1. The graduation is sometimes started from one point of the scale, near the normal. and the size of the capillary tube is guessed at. No upper point being fixed by the maker, the higher graduations may be erroneous to the extent of several degrees. 2. Too much air separating the index from the column of mercury causes the index to rise with a jerky motion; air above the index forces the index down when the thermometer is taken away from the body. In some thermometers errors from this cause amount to two degrees at high temperatures. 3. New thermometers increase their readings rapidly during the first months after manufacture, so that instruments which were right when made may change their indications as much as two degrees within a year.

It will be seen that these errors are not such as the dealer can readily detect. Even in those cases where a dealer is provided with a standard thermometer with which comparisons could be made, it is a difficult matter to determine the errors of the standard itself, and the unsupported representations of dealers and druggists therefore, though made in perfect good faith, cannot from the nature of the case, afford the physician satisfactory evidence that any thermometer he may buy is not affected with errors, which in many instances under our observation have amounted to several degrees.

Following the example of the Royal Society's Observatory at Kew, at which during the past year upwards of five thousand thermometers were examined, this Observatory has established a department to which any physician or other person may send thermometers by mail or express, and upon the payment of a small fee receive certificates of their exact errors. The facilities are such that there is no good reason why physicians should not buy their new thermometers furnished with the Yale Certificate by the dealers: in those cases where no certificate is furnished, the uncertainty may amount to two degrees. It should be remembered that thermometers which the physician has had in his possession for many months are certain to have had the requisite seasoning, and therefore an old thermometer with a recent certificate is of more value than a new one, or one about whose age there is doubt.

The Observatory has been called upon within three months to certify about seven hundred thermometers from various parts of our country; the results of this work have demonstrated the gross inaccuracy of the cheaper clinical thermometers as commonly sold, and seem to render expedient the publication of this card calling the attention of physicians to these errors and the great difficulty of detecting them except with the appliances of an Observatory devoted to this work.

LEONARD WALDO,
Astronomer in Charge.

NEW HAVEN, CONN., Feb. 1, 1881.

NOTICE.—To insure the safe transmission of thermometers by express, they should be packed in two boxes, one inside the other, and the space filled with cotton-wool or its equivalent. Single clinical thermometers may be packed in wooden boxes and sent by mail. New York makers desiring to send thermometers by hand may do so by leaving them with Lockwood's private express, care Oelschlaeger Bros., 162 William Street. The P. O. Address of the Observatory is Box 853. The Office is at 89 Orange Street, to which all packages may be directed.

STATE MEDICINE.—A most laudable effort is now being made to establish by legislative enactment a State Board of Health in West Virginia. When it is remembered that a century ago the whole of West Virginia was almost a wilderness, and that the cause of the difference between its condition then and its condition now is human labor, the necessity for maintaining such labor in the highest condition of excellence produced by an efficient Board of Health is conspicuously established. No man of sense can fail to grasp this problem and its manifest solution. Every legislator can be made to see the fact with great ease, and it is the duty of every physician in a legislature to present it and to explain it fully. When Mr. Gladstone, in his great speech before the British Medical Association, asserted that the health of its people should be the chiefest care of the State, he asserted not only a great truth worthy of a great statesman, but what has been accepted as demonstrable truth since the promulgation of the classic Roman aphorism "*sanitas populi suprema lex.*" Every physician in the legislature of West Virginia should do his whole duty and should receive the support of every physician in the state. The legislature, however, should not be allowed to follow the example set by the Old Commonwealth, the Great Mother of States, in creating a State Board of Health and failing to provide an appropriation to give it life and efficiency. Such an act was a grotesque burlesque upon legislation, unworthy of the grand old State, and unjust to the splendid corps of medical workers who framed the Bill passed.

ANNALS OF ANATOMY AND SURGERY is the new title of the monthly Journal of the Anatomical and Surgical Society of Brooklyn, N. Y. The scope of the work has been enlarged, and it is now edited with marked ability by Drs. Lewis S. Pilcher and George R. Fowler. Subscription price, $2 annually.

THE ACADEMY OF MEDICINE.—At a large meeting of the medical profession last month Dr. Fordyce Barker was unanimously re-elected president of the New York Academy of Medicine, and the following named physicians were also chosen to serve three years: Dr. Robert F. Weir, vice president ; Dr. S. T. Hubbard, trustee: Dr. C. C. Lee, one of the Committe on Education ; Dr. J. H. Emerson, one of the Committee on Admission ; Dr. V. P. Gibney, one of Committee on Ethics ; Dr. C. S. Bull, one of Committee on Library. The library of the Academy now contains over seventeen thousand volumes, and receives regularly 122 American and European medical publications, and is open for consultation to all physicians of every school from nine A. M. to one P. M. The president announced that Mrs. John Jacob Astor had given $500 for the improvement of the journal and circulating department of the library.

THE LONDON LANCET AND THE JEFFERSON (PA.) MEDICAL COLLEGE. —The *Lancet* states that students may graduate at this college, without having seen a case of disease. The *New York Medical Record* copied this statement, and when called to account for it by Dr. S. D. Gross, apologizes, and publishes a letter from Dr. Gross, in which he indignantly denies the truth of the statement. But is not the statement correct ? Can not a student so graduate ? Is attendance there upon clinics compulsory ? If not, is not the *Lancet's* statement true ? And was not the *Record's* apology out of place ? It may be said, so far from the the Jefferson Medical College being (as is alleged by Dr. Gross) the first to establish and maintain clinical teaching, that Dr. Carson, in his history of the Medical Department of the University of Pennsylvania, asserts that the college mentioned, required an attendance upon clinical teaching as one of the requirements for graduation *ten years before the Jefferson Medical College was created.* If Dr. Carson's assertion is correct, should not every journal, which has noticed this matter, do justice to the University of Pennsylvania ? "*Palmam qui meruit ferat.*" Every one admits, with pleasure, the excellent clinical facilities and clinical teaching at the Jefferson Medical College, and at *many other medical colleges*, but is the claim made for it accurate and just ? and was the statement made by the *Lancet* and the *Record* inaccurate or unjust ?

TREATMENT OF GOITRE.—Dr. Stevens, of Quebec, (*Canadian Jour. of Med. Science*) reports seven cases of goitre cured by the chloride of ammonium. Six were girls under twenty years of age, and one a married woman, aged forty. The dose given was ten grains three times a day, the tumors entirely disappearing at the end of three months.

WHAT KILLS.—There were 31,866 deaths in this city in the year 1880 and only 27,536 births. But the fact that the deaths represent a majority of 4,330 need excite no apprehension, for very many midwifes make no report, and the people of large cities are in great part born in the rural districts or in foreign countries. Indeed, the extent to which the population in cities is drawn from extraneous sources is illustrated in the record of centenarians. Eleven persons died in New York city in the course of the year aged one hundred years or upward, of whom ten were women. Not one of these was a native of the city and only one was born in this country. Seven were natives of Ireland, one of Germany, one of England, one of India, and one was a negro woman from Virginia. Perhaps it is a fact in support of the skeptical views in regard to great age that centenarians are all born so far away that it is impossible to verify the dates of birth by other evidence than their own report. Heavy death records are due to the frightful slaughter of children in unhealthy homes. Two-fifths of all those who die in this city are under five years of age, and more than one-fourth under one year ; but the number of those less than five years who die in this city is pretty constant and has varied very slightly. Diphtheria, though more is said about it in occasional reports than about all other diseases together, is not by any means the most fatal malady in the list Its destructiveness is a great deal less than that of consumption and decidedly less than that of the intestinal derangements whose principal manifestation is diarrhœa; while even pneumonia, of which one scarcely ever hears in sensational reports, has nearly twice the destructiveness of the more dreaded malady diphtheria. Indeed, inflammatory diseases like pneumonia, bronchitis, nephritis and the rest, and diseases that are consequent upon inflammatory diseases, are the true scourges of every city population.

WHAT IS HYPNOTISM.—In Dr. Hammond's recently published volume on "Nervous Derangements" there is quoted from Mr. Braid an account of the method of inducing this remarkable physical and mental condition: Take any bright object, as a gold piece; hold it from eight to fifteen inches from the eyes in such a position as will produce a strained action of the eyes but enable the subject to gaze fixedly upon the object. The eyelids close and become spasmodically closed. In this condition the person will remain and become rigidly fixed in any position in which the operator places him, and falls into a profound torpor in that position. But the intellectual condition of the victim is as much under the influence of the operator as is his physical state, and the mere suggestion of a thought, theory or fancy on the part of the operator becomes in the mind of the subject exalted to a resolute, firm, unalterable conviction. —*Ex.*

A CASE of cure of congenital partial deafness by an attack of typhoid fever is reported (Cincinnati *Lancet and Clinic*) by Dr. E. F. Wells, of Minster, O. The patient had been partially deaf until he was forty-five years of age, when he suffered a severe attack of typhoid, during which his hearing was worse than usual. With convalescence his hearing improved, and is now perfect.

CHARGING LESS THAN THE FEE BILL PRESCRIBES.—It seems that lawyers also try their brethren for charging less than the fee-bill prescribes. In a recent case of this kind, the defence offered was that the accused had taken all that his client had and did not see how he could have done *better*. The defence was unanimously accepted.

THE MORALE OF THE DOCTORS AND THE CLERGY.—If a Doctor, in entering any family professionally, violates the virtue and purity of that family he is "cut" and forever disgraced among his fraternity. If a clergyman be a recognized adulterer, and even so declared by the injured woman, he is still socially fêted and cherished. It is a revolting and disgraceful fact.

GROSS SURGICAL PRIZE.—The Philadelphia Academy of Surgery offers through its president, Professor S. D. Gross, a prize of five hundred dollars for the best essay on the Surgical Pathology and Treatment of Tumors, or Morbid Growths of the Testis, Scrotum, and Spermatic Cord, to be open exclusively to American surgeons.

(1.) The essay must be founded solely upon original investigations, be illustrated by suitable drawings, microscopical and other, and be written in scholarly English.

(2.) The essay shall be the property of the academy, which shall, at its option, permit the author to publish it at his own risk or expense.

(3.) Each essay must be accompanied by a motto, and by a sealed letter containing the author's name.

(4.) The essay must comprise an

amount of matter equal to two hundred and fifty pages octavo.

(5.) The award will be made at the meeting of the academy in January, 1884, by a committee of five of its Fellows.

The committee, which has been appointed, consists of D. Hayes Agnew, M. D.; William Hunt, M. D.; R. J. Levis, M. D.; J. H. Packard, M. D.; J. Ewing Mears, M. D.

All essays should be forwarded to the secretary of the committee, at a date not later than October 15, 1883, J. Ewing Mears, M. D., secretary of the committee, 1429 Walnut street, Philadelphia, Pa.

FEES OF DOCTORS.—The signal defeat of a bill—it was smothered in committee—introduced at the last session of the Kentucky legislature to place the fees of doctors on the list of preferred claims allowed by the statute causes the *Louisville Medical News* to invite communications upon the thesis, What will increase the Material Prosperity of Doctors? The discussion of the theme will of course involve the consideration of many subsidiary points. Prominent among these will be the vastness of the army which has to divide the rations of medicine. How are we to get rid of the overplus by other method than the slow process of starving? How are we to prevent ambitious schools from crowding the ranks beyond the power of pestilence to thin? Which promises to be the most successful bar against admission, an educational, pecuniary, or legal standard? And the army being formed, does it fight in proper lines and under proper regulations? Are the officers to be trusted? Are they, or are they not, satisfied with getting the choicest spoils, and do they not exact discipline for selfish ends? Is, or is not, the code a humbug, a mighty tower for the strong and a snare for the weak? Or, dropping the military and coming down to ordinary life, would, or would not, medicine be benefitted in dignity as well as in worldly goods by putting it on a mere commercial basis? It is easier to suggest than to make a reply.

THE Union Heating Company proposes to supply heat to houses by a system of pipes circulating heated water under pressure of about 376°, that is, a pressure of about 160 pounds above the atmosphere. In being conveyed a mile in boxed pipes, under ground, the water, it is claimed, loses not more than 1°, so that a temperature of 375° can be maintained in the pipes of a cooking range, a heat sufficient for all culinary purposes. The heating of houses can be effected either by air currents circulating around hot water coils, or by means of steam radiators, the hot water being converted into steam in small converting chambers.

In the operation of the system central boiler stations will be established in districts of about one square mile area. The pipes conveying the superheated water from the cental station and back again, are laid in the same trench, and are so connected as to allow a forced circulation. The return pipe conveys to the generator all the water not drawn off for domestic or other purposes, thereby saving all the heat not available for heating purposes or for steam power.

The alleged advantages of this system of circulating superheated water over systems of steam heating consists in the smaller size and cost of the service pipes; in the smaller loss of heat by radiation and condensation, owing to the smallness of the pipes; and the saving of fuel through the return of all the unused condensed water to the central generator.

At the trial station at 125th street about 3,000 feet of pipe have been laid. The water to be circulated is heated to about 342°, and is said to be driven through the system at such a rate that no water is allowed to be more than fifteen minutes away from the boiler. It is estimated that two or three cubic feet of water an hour will suffice for heating an ordinary city house, and that the cost to consumers will be much less than with any other system of heating.

AINHUM.—Dr. Da Silva Lima, whose name is best known in connection with that curious pathological condition termed by him "Ainhum," and which he was the first to describe in 1867, has recently contributed (*Archives of Dermatology*, Oct. 1880), an interesting paper on the same subject, embodying his latest views and conclusions. He defines ainhum as being a disease peculiar to the African race, characterized by a slow, progressive, fatty degeneration, generally with considerable increase in volume of the toes, especially of the smallest involving almost all their anatomical elements, resulting from a nearly lineal strangulation, which strangulation is caused by the presence of a narrow strip of contracted and hardened skin, which embraces at first a part, and afterwards the whole of the circumference of the toe, on a level with the digito-plantar fold. This constriction, after the lapse of from four to ten years, forms a deep circular furrow, which determines the absorption of the phalanges and the obliteration of the vessels, with the final and inevitable dropping off of the toe, either as the result of accidental injury or gangrene. It is a singular fact that the disease generally localizes itself in one or both of the little toes, simultaneously or successively, and it is only recently that a few exceptions to this rule have been noted.

Ainhum begins by a slight and somewhat less than circular depression, occupying the internal and inferior aspects of the root of the little toe, exactly on a level with the digito-plantar fold. The skin, corresponding to this initial depression, is both thickened and indurated, and, at this period, there is neither inflammation, ulceration nor notable pain present. The limited movements of the digit are preserved. Later it may be noted that the affected toe, if it be the little one, gradually separates itself from its neighbor at the root; but its free extremity tends to incline inward, forming thus an angle at the level of the depression. The digit gradually increases in volume as the cutaneous depression extends all around the superior and external parts of the toe in a circular direction. There is no actual pain in the part, but some slight tenderness upon pressure. When the constricting circle is completed, the formerly shallow depression becomes a deep and narrow furrow, as if produced by the wire of an écraseur, which had buried itself in the tissues. This slow and progressive strangulation of the toe goes so far that finally nothing remains of its attachments to the foot save a short and slender pedicle, which can be made visible with difficulty by separating the margins of the furrow. At the bottom of this latter an ulcerative process is sometimes observed, and again merely the existence of a crust. When ulceration exists, the furrow is moistened by an ichorous and fetid discharge. The adjacent skin becomes rough, while the extremity of the toe increases to several times the natural size, assuming the globular shape of a small potato. The nail remains intact. In the concluding stage of the disease the toe acquires abnormal mobility, and can be inclined to either side or twisted on its axis in either direction. It is in this stage that the first phalanx has completely disappeared on a level with the furrow. The pain now becomes sharp, and is intensified by movements of the digits. It is generally after this condition has been reached that patients practice or demand amputation as the sole relief from their sufferings. The malady is purely local in its nature, the general health being at all times unaffected. Men are more frequently attacked than women. In the treatment of ainhum the author recommends an incision of the skin perpendicular to the line ofthe furrow or constricting ring.

Ainhum would seem to be entirely distinct from leprosy. It is said to prevail very commonly on the west coast of Africa. It is encountered in Asia only in Pondicherry, in French India. In South America it is seen in Bahia, Rio de Janeiro and Buenos Ayres only, and then in the person of African blacks; but it is certain, asserts the author, that the disease shows itself equally in all the Brazilian provinces where slavery exists. There is no positive evidence that ainhum has ever attacked the aboriginal Brazilian Indians.—[*St. Louis Courier of Med.*

LUMINOUS PAINT.—According to the London *Building News*, luminous paint is getting into quite extensive use in England. Mention is made of offices coated with the paint which give great satisfaction to the occupants. The effect is that of a subdued light, every object in the room being clearly visible, so that in a room so treated one could enter without a light, and find any desired article. The luminous paint is excited by the ordinary daylight, and its effect is said to continue for about thirteen hours, so that it is well adapted for painting bedroom ceilings, passages that are dark at night, and other places where lamps are objectionable or considered necessary. For staircases and passages a mere band of the paint will serve as a guide, and costs but a trifle. For outdoor purposes the oil paint is used, but for ceilings and walls the luminous paint, mixed with water and special size, can be used the same as ordinary whitewash, and presents a similar appearance in the daylight. But the recent discovery that it can be applied as ordinary whitewash considerably expands the field of its usefulness. Sheets of glass coated with the paint are in use in some of the vesssels of the navy, at the Waltham Powder Factory, at Young's paraffine works, and in the spirit vaults of several London docks; and now that, by increased production and the use of water as the medium, its costs is reduced by one half, it will probably be extensively used for painting walls and ceilings. The ordinary form of oil paint has already been applied in many ways, to all statues and busts, to toys, to clock faces, to name plates and numbers on house doors, and to notice boards, such as "mind the step," "to let," etc. The paint emits light without combustion, and therefore does not vitiate the atmosphere. Several experimental carriages are now running on different railways, the paint being used instead of lamps, which are necessary all day on account of the line passing through occasional tunnels.

THE HEALTH OF CITIES.—Statistics compiled by the National Board of Health show that for the year ending October 31st, 1880, the more important cities of the world rank as follows in comparative healthfulness. The death rate shows the number of deaths to each 1,000 persons during the year :

City.	Population.	Death Rate.
Chicago	503.298	17.9
Philadelphia	850.000	18.3
St. Louis	333.577	18.8
Boston	375.000	20
Baltimore	393.796	20.9
London	3,254.260	21
Leeds	318.291	21.8
Glasgow	589.598	21.9
New York	1,203.223	23.4
Paris	1,988.806	24
Brooklyn	556.889	25.8
New Orleans	216.359	27.7
Lyons	342.815	27.7
Berlin	1,096.644	29.3
Dublin	314.666	32.9

Accumulation of Foreign Bodies in the Stomach.—The following case is reported by Charles L. Dayton, M. D., in the Buffalo *Medical and Surgical Journal.* It demonstrates that in gastric diseases there is great difficulty in forming a correct diagnosis, and also in reaching a reliable prognosis, the problem only yielding a satisfactory solution through a *post mortem* examination:

Mr. S., aged 45, residing at Black Rock, for a period of six months had complained of gastric pain with nausea, and other symptoms of indigestion. He presented the appearance of one suffering from scirrhus of the stomach or aggravated dyspepsia. Failing to secure relief after consulting several physicians, he consented to accompany me, with a view to consult Prof. Austin Flint, Sr., at that time residing in Buffalo. Prof. Flint examined the patient thoroughly and expressed the opinion that he would ultimately recover. Two days afterward the patient suddenly died. At the autopsy,in the presence of Drs. L. P. Dayton, Tobie, and Beaman, the stomach was removed. It contained a tumblerful of prune pits ; the pyloric orifice was so far occluded by the induration of the surrounding tissues that it admitted only the passage of a small catheter. About three inches from the pyloric orifice the stomach was perforated, probably through the influence of the prunes. His wife stated that he had not eaten prunes in five or six months, and could offer no explanation for his swallowing the stones.

The case is interesting on account of the presence of so large a quantity of foreign substances in the stomach, of the similarity of symptoms to those usually occurring in ulceration and scirrhus, and of the obscurity often attending gastric and intestinal disease, which is cleared up only through the *post mortem* examination.

Neuralgia as a " Warning."—The great prevalence of " neuralgia "—or what commonly goes by that name—should be regarded as a warning indicative of a low condition of health, which must necessarily render those who are affected with this painful malady especially susceptible to the invasion of diseases of an aggressive type. This is the season at which it is particularly desirable to be strong, and well furnished with the sort of strength that affords a natural protection against disease. There will presently be need of all the internal heat which the organism can command, and a good store of fat for use as fuel is not to be despised. It is no less essential that the vital forces should be vigorous, and the nerve power, especially, in full development. Neuralgia indicates a low or depressed state of vitality, and nothing so rapidly exhausts the system as pain that prevents sleep and agonizes both body and mind. It is, therefore, of the first moment that attacks of this affection, incidental to and indicative of a poor and weak state, should be promptly placed under treatment, and as rapidly as may be controlled. It is worth while to note this fact, because, while the spirit of manliness incites the " strong-minded " to patient endurance of suffering. it is not wise to suffer the distress caused by this malady, as many are now suffering it, without seeking relief, forgetful of the condition it bespeaks and the constitutional danger of which it is a warning sign. —*Lancet.*

Suggestions Concerning Long Life.—If any one could furnish the world with a medicine which would insure a long life, there is no end to the demand he would have for his drug. The *Herald of Health* thinks he would need many factories to make it, and many banks to hold the money he would receive. Fortunately there is no such medicine, and so the world will have to get along in some other way.

Some time ago the French government sent a circular letter to all the districts of that country to collect information as to those conditions of life which seemed to favor longevity. The replies were very interesting, but on the whole rather monotonous; and the general result was that longevity is promoted by great sobriety, regular labor, especially in the open air, short of excessive fatigue, easy hours, a well-off condition, a philosophical mind in meeting troubles, not too much intellect, and a domestic life. The value of marriage was universally admitted, and long-lived parents were also found an important factor. A healthy climate and good water were mentioned. All this agrees with common sense, unless the idea that the intellect is a hindrance to longevity be considered unreasonable, and we know that some of the most intellectual men have lived to great age.

Partial Intoxication as a Preventive of Shock.—Dr. Stephen Smith, in a recent clinical lecture, presented a patient for operation in whom a condition of partial intoxication had been purposely induced in order to obviate the shock from the effect of the operation. His attention was drawn to the subject some years ago by observing that patients who undergo serious injuries, while in a state of partial intoxication, do not suffer from shock as do those who sustain similar injuries when sober. He first induced this condition, purposely, as preparatory for an operation, in a young woman of peculiarly susceptible nervous temperament, upon whom it was necessary to perform an amputation of the foot on account of caries. The operation had been twice attempted and abandoned on account of the impossibility of bringing her safely under the influence of an anæsthetic, either choloroform or ether. It was determined to give her stimulants for several hours before the operation until decidedly intoxicated. The result was entirely successful. A very small quantity of ether brought about anæsthesia; and there was no disturbance of respiration or circulation during the operation nor afterwards, and the recovery was very prompt and satisfactory.

Dr. Smith recommends this use of stimulants, giving one, two or three ounces, according to the condition and habits of the patient, every hour for five or six hours before the operation is performed, in the case of susceptible nervous temperament and with those with an enfeebled condition of the heart and noticeably overloaded with fat.—*N. Y. Med. Record.*

To Restore the Heart's Action when it has Ceased to Beat.—Jago suggests the testing of acupuncture of the heart as a means of restoring its action when this is interrupted in the administration of chloroform or anæsthetics. He recommends careful experimentation as to the effect of acupuncture of the heart in animals.

He relates, also, a case in which the action of the heart had been suspended under the administration of bichloride of methylene at the hands of a dentist. When Dr. Jago was called in respiration, and pulsation at the wrist had ceased. The doctor gave the patient a sharp, very sudden blow with his knuckles over the region of the apex of the heart. This seemed to arouse the heart's action at once. Respiration and pulsation returned, and the patient was saved. He believes this procedure might be of sevice in desperate cases of syncope due to other causes.—*Brit. Med. Jour.*

MEDICAL NEWS.

"Nulla dies sine linea."

DR. J. MARION SIMS has so far gained strength as to be able to leave home for the South. He has made the trip by short stages, and with frequent intervals of rest. A telegram received from him gives the very pleasing assurance that he is already feeling the benefit of the change. He is now at Palatka, Fla., and gradually improving in strength and appetite.

MEDICAL AND SURGICAL HISTORY OF THE LATE WAR.—A bill has been recently introduced in Congress which authorizes the Public Printer to reprint, from the stereotype plates, an edition of 50,000 copies of each of the four volumes heretofore issued from the Government Printing Office. The fifth volume is now going through the press. Should the bill become a law, these books will be for gratuitous distribution by members of Congress. Consequently, those who make timely application can, no doubt, be accommodated.

INTERESTING FACTS.—Total number of medical colleges in the United States, 69; number in New England and Middle States, 16; number in West and South, 53; total number of students, 8,279; average for each New England and Middle State college, 216; average in West and South, 90; total students in New England and Middle States, 3,467; total students in West and South, 4,812. Students have taken the advice of Horace Greeley, "Young man, go West."

DR. ROBERT S. BARNES, Obstetrician of St. George's Hospital, London, has resigned his position.

FOREIGN MEDICAL STUDENTS in Vienna, 95; of these 40 are Americans.

SOUTH CAROLINA now allows physicians summoned as experts ten dollars per diem

DR. J. A. THACKER, editor of the Cincinnati *Medical News*, has been unanimously elected a member of the Royal Microscopic Society of Great Britain; a deserved compliment.

FATAL BLOOD POISONING, from wearing stockings colored in imitation of "old gold" has just occurred at Port Jervis, N. Y., in the person of an interesting young lady.

THE *London Lancet* terms Prunus Virginiana, "the Virginian prune."

BERI-BERI.—There are 18 Brazilian sailors in San Francisco Hospitals suffering with this disease.

DR. L. P. YANDELL has resigned his position as co-editor of the *Louisville Medical News*.

CENTENARIANS in numbers, averaging from 100 to 120 years of age, have obituary notices in the exchanges.

PURE DRUGS.—C. Lewis Diehl, of Louisville, Ky., an eminent pharmaceutist and most reliable, states that while drugs are adulterated the evil is magnified and that good prices will always command pure drugs.

YELLOW FEVER.—In the past year 968 vessels arrived here from yellow fever ports; 200 from infected ports; 27 cases of the fever were admitted into quarantine hospital; 10 died. In not a single instance was the disease propagated beyond quarantine. Without quarantine, New York, and ports and points connected with it, would have been scourged.

HOSPITAL Saturday and Sunday in this city yielded, clear of all expenses, $41,000.

THE *Sanitarian* for February, the best American publication devoted to hygiene, has an able article from the practical pen of Colonel George E. Waring, Jr., on "The Storm-water Question in Relation to Sewerage."

DR. GEORGE FERREL, a member of the West Virginia Legislature, died suddenly of apoplexy at Wheeling, Feb. 1st, 1881, aged 50.

DR. WILLIAM D. CHEESEBOROUGH, of this city, died Feb. 3d, aged 59 years.

THE RT. REV. DR. EDWARD A. WASHBURNE, the distinguished rector of Calvary church, N. Y., one of the most renowned prelates of his generation, and for a long time identified with medical science and medical societies, died in this city, Feb. 2d, aged 62 years of age, and full of merited honors.

JUSTIFIABLE HOMICIDE.—The weather has been so extremely severe, that every one has been tried by plumbers beyond endurance. So much so, indeed, that it is rumored, a New York judge has decided, or will decide, or ought to decide, that the killing of a plumber is justifiable homicide.

A NEW CAUSE OF DEATH.—A jury in Topeka, Kansas, has in its verdict, furnished the following strange cause for death, viz: "That Augustus Williams came to his death from having called John Ferguson a liar."

MONSTROSITY.—Michigan has a pig with a trunk. Ought not this to be checked?—*Ex.*

DR. JOHN LORING VATTIER, one of the most eminent physicians of Cincinnati, O., died Jan. 13th.

LOCAL ANÆSTHETIC FOR RECENT SCALDS.—Equal parts of the oil of peppermint and glycerine.

HERMANN W. GEDICKE, a member of the Newark Common Council, and representing in it the wealthiest and most fashionable ward in the city, was sentenced in the Court of Quarter Sessions January 3rd to serve two years in State Prison and to pay a fine of $250.

BUREAU OF VITAL STATISTICS.—There were during the past week 718 deaths, 479 births and 170 marriages. During the same period there were recorded 170 cases of scarlet fever, 103 of diphtheria, 39 of measles, 15 of small-pox and 5 of typhoid fever.

SEMI-ANNUAL REPORT of the mortality of the City of Jacksonville, Fla., for the last six months of the year 1880. Compiled by A. W. Knight, M.D., Health Officer. The revised census of 1880 rates the population of the City proper at 8,000. By this estimate we have a total death-rate per 1,000 for the last six months, 14.5. Dividing the population, we estimate white, 5,000; colored, 3,000. Death-rate for white, 12.2 ; for colored, 18.3. Deducting the non-residents we shall have as a death-rate properly chargeable to the City, 12.5 per 1,000. There has been a slight increase of mortality in this city during the year. All of the reports from other cities throughout the country, show a similar increase, as received at that office.

DR. A. WELLINTON ADAMS, editor of the *Rocky Mountain Review*, Colorado Springs, Col., has invented the best electric larynyoscope before the profession.

DR. W. A. HAMMOND'S daughter, the Marchioness de Lanza, is the authoress of a novel which is soon to be issued by the Putnams. The chief interest of the work consists in the fact that the heroine while in the second state engages herself to be married and when aroused from this state knows nothing of it. Her father writes a preface on double consciousness.

A TRAINING SCHOOL FOR NURSES is being inaugurated in Chicago, Ill. Each city should have one.

SENSIBLE.—In St. Louis, Mo., any medical school may hold clinics at the city hospital. The trustees of the hospital leave the selection of the lecturers to the schools.

DR. WM. PEPPER has been made provost of the University of Pennsylvania.

THE NEW YORK TRAINING SCHOOL FOR NURSES, the pioneer institution, celebrated its eighth anniversary, Jan. 11th.

ON New Year's night one of the Nautch (sacred ?) dancers, who arrived a few weeks ago from Hindostan, and said to be only in her thirteenth year, was delivered of a male child, the first Hindoo baby ever born on American soil. The infant weighed only four pounds and four ounces, and lived but a day or two.

THE Black-Mailing suit against Dr. H. D. Noyes, of this city, for $10,000 (for the alleged loss of an eye), has terminated favorably to this eminent ophthalmologist. Prominent ophthalmologists testified, of course, in his favor.

MRS. EDWARD SEGUIN, of N. Y., will continue the Physiological School for weak-minded and weak-bodied children which was conducted by her deceased husband.

THE St. Paul Medical College (requiring an attendance upon four sessions) has sixteen students ! !

THE Vaccination Bureau of this city uses bovine virus. It vaccinated in one year 48,000 persons.

THREE IN ONE.—An attempt is being made to consolidate the three medical colleges of Cincinnati, Ohio. So far it is unsuccessful, or at least incomplete.

TRAINED NURSES.—Those who wish trained nurses for the sick, in the city or country, can obtain them promptly by writing or telegraphing to Miss A. S. Mabie, 164 West 34th street. Parties should always state the sex and disease of the patient. The Institution of Miss Mabie is entirely trustworthy, and it is recommended by many of the best physicians in this city; Drs. H. D. Noyes, W. R. Gilette, John T. Metcalfe, etc., etc.

THE Kentucky State Medicine Society will hold its next annual session in the city of Covington, beginning on Tuesday, April 5th, 1881.

This is one of the oldest and best of American State Medical Societies; and has greatly increased its efficiency by discontinuing the annual volume of transactions, thus giving the results of its work directly to the whole profession through the medical press.

A SCOUNDREL CAGED.—"Dr." Selden W. Crowe, alias, "Dr." Charles W. Selden, the resurrectionist, body-seller and receiver, "bogus diploma" doctor, etc., is now in jail in this city. His is a most unsavory record. He was one of four alleged physicians who started a bogus medical college in Washington, in 1874, sending out circulars offering diplomas for $25. It was called the Washington Medical Institute. It was the subject of diplomatic correspondence on one occasion between the State Department and Europe. Dr. Crowe some months later got into a row with the Washington gamblers, resulting in an attempt on his part to suppress the business, which proved a lamentable failure on his part. He obtained some notoriety in connection with the Stewart grave robbery in 1878. It is related of him by gamblers that he put his inventive genius to work one day and invented the game called "the centennial." It was called by that name because the player had only one chance in 100 to win. When the Washington authorities were looking for him last November he endeavored to elude them by inserting the following among the death notices in the *Herald* of the 12th of that month:

> CROWE.—Suddenly, on Friday, November 12th, 1880, S. W. CROWE, M. D., of heart disease, while en route between New York and Philadelphia.
>
> Notice of funeral hereafter.
>
> Washington papers please copy.—*Ex.*

When the cuttle fish wishes to elude its pursuers, it ejects its own inky fluid —Crowe or Selden (or whoever he may be) uses printers' ink for the same purpose. Put him with Buchanan; in the Penitentiary.

FACIAL EXPRESSIONS.—Dr. Ambrose Ranney, of New York, has recently contributed to the New York *Medical Journal*, a valuable illustrated article on the different facial expressions, and some of the journals have republished it. There was one expression, however, which he omitted, it being the one described by Sydney Smith; it will be remembered that when Tom Moore was having his portrait painted by the celebrated Newton, Sydney Smith, who accompanied the great poet to the studio, said to the artist: "Couldn't you contrive to throw into his expression a stronger feeling of hostility to the established church of England?" It was inexcusable on the part of Dr. Ranney not to have included this familiar expression among those so graphically presented.

FEMALE DOCTORS IN EGYPT.—They had female doctors in Egypt three thousand years ago. *Puck* says this does not surprise him for he was always sure that Dr. Mary Walker is an Egyptian.

ELOQUENT STATUARY.—Mr. Jay Gould represented as Atlas, supporting *The World.*

THE EFFECTS OF DRESS.—*Puck* has explained why Mr. Gladstone refused the Order of the Garter; he wears socks.

LUNACY TREATED BY MUSIC.—*Figaro* has discovered why Dr. Oscar Jenings, of Paris, who has no ear for music treats his lunacy patients with music; he is a homœopath.

EFFECTS OF THE BROOKLYN SMALL POX EPIDEMIC.—"And you will be mine," said Edwin, gazing into Angelina's dreamy eyes; "say you will be mine," and he placed his hand tenderly upon her arm; she shrieked violently and he, startled and surprised, exclaimed, "why, what is the matter?" "What is the matter," shrieked the gentle Angelina, "why don't you know I have been vaccinated." And the knowing Edwin, who was a young doctor, placed his arm around her waist. The pain immediately subsided.—*Ex.*

NEW YORK MEDICAL ABSTRACT.—Number one, volume one of this journal has been received. It would be termed here "a number one" journal, if the the *Rocky Mountain Review* had not indulged in the same pun in regard to its first number and been very severely censured by one of the exchanges, too stupid to see the witticism. The *Abstract* contains thirty-two pages a month, and is published for $1 yearly. The following announcement, worthy of imitation, is especially commended to many of the exchanges :

"Business notices of all kinds will be excluded from the columns of the *Abstract*, the design being to make it solely what its title imports—A monthly Medical journal."

The *Abstract* is well prepared and issued—Messrs. McKesson & Robbins, the enterprising druggists of this city, are the publishers.

MEDICAL COLLEGE OF VIRGINIA.—Dr. Hunter McGuire resigns, Dr. J. S. Dorsey Cullen is elected to his chair, Dr. W. J. S. Wellford is elected to Dr. Cullen's chair, Dr. M. L. James is elected to Dr. Wellford's place—a new deal. May those who are to play the future game, win.

WINTER CHOLERA.—There has been an epidemic of this trouble in many cities of the West. It seems to be a follicular enteritis. Dieting, rest, antacids, and small doses of opiates control the disease very promptly.

AN ANATOMY ACT.—The Legislature of Tennessee is about to pass an act which will be the death blow to the medical colleges of the State. The removal of a body from a grave for dissecting purposes is made a felony, punishable by imprisonment in the penitentiary "at hard labor, and rendering the person infamous." Those who aid or abet such work, or "procure it to be done," are equally punishable. It is certainly absurd and silly in the extreme to punish doctors for ignorance of anatomy, and to punish them still more severely for obtaining a knowledge of anatomy. If legislatures would pass an act giving to colleges the bodies of paupers and criminals, etc., graves would never be disturbed. When will the demagogues and Solons of State Legislatures manifest a modicum, at least, of common sense ?

MR. WILLIAM SNOWDEN, instrument maker, 7 South Eleventh street, Philadelphia, Pa., has sent to this Journal an improved bin-aural sthethoscope, costing only $3. It is the best at present before the public. The maker will please accept thanks for his gift.

THE MEDICAL RECORD (N. Y.) has established ostensibly for the benefit of physicians (!) a "Physicians' Directory of where to buy." The "where" is at any House which pleases to advertise in the *Record* and on the page indicated, "*at* $15 *per line for one year.*" Is this just to its readers ? Are advertisers fools to suppose that physicians can be thus deceived, and that they are devoid of common sense ?

EDITORIAL.

"Nullius addictus jurare in verba magistri."—HOR.

BUSINESS NOTICES.

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AMERICAN MEDICAL TALENT.—One of the most unwelcome features in many recent American medical books, is the entire repudiation of American medical talent and

American medical achievement. These injudicious but censurable authors are profuse in their references to German and French authorities, and even to the English and Scotch; but in regard to the merits and triumphs of their own countrymen, they are as dumb as the Sphynx, on the sands of the Egyptian desert.

The foolish error is not due to ignorance; it is a senseless piece of affectation, perfectly transparent and wholly inexcusable. This species of repudiation of American talent and labor was common enough in the last century, among the literary and professional writers of Europe; but it was chiefly in the last century. Since then foreign authors have seen both their error and their folly, and now these manifestations are chiefly made by writers at home; men who weakly imagine that quotations from German and French authorities, with an entire repudiation of all American names, will be accepted as evidences of superior wisdom; and that their compositions will be received as triumphant proofs of superior erudition. If they could but see themselves as others see them!!

It is related of a prominent gentleman, of Fredericksburg, Va., that, after graduating at Yale College, and returning home, he attended a great county meeting, called for the purpose of building an important railroad. He listened with much impatience to the sound and judicious speeches of his wise but untraveled neighbors, who cited, as their authorities, the arguments of home-bred engineers, and then he determined to air his own peculiar erudition. After labored disquisitions on metaphysics and natural philosophy, with didactic displays in regard to geology, interspersed with quotations from Latin authors and British poets, he sat down, covered, as he supposed, with forensic laurels. But he was not allowed to indulge long in these sweet reflections upon his individual learning and personal distinction. A plain farmer, dressed in the homespun of the day, arose, and, with his arms under his coat-tails, and his great silver spectacles upon his eyes, gazed upon the speaker with great deliberation, and thus delivered his criticism upon the speech: "Young man! you have made a very skoolastic speech, but your brain are weak!!"

So may it be said of any American author, who, stuffed with the dicta and dogmas of foreign authors, is purblind in regard to the merits, the labors, and the triumphs of his own countrymen.

When European savans are purchasing with avidity American medical works, and when these works are now often published simultaneously in English, French, German, Spanish and Italian, what is to be said of those American authors, who, blind in their adulation of foreign writers, and quoting them *ad nauseam*, are conspicuously silent relative to the merits of their associates and friends at home? Is the criticism of the old farmer too strong?

The true author should never fail to be an eclectic, for partisanship is always as odious as pretension. Macaulay, with all of his vast erudition, has emasculated his writings by constant injustice to his opponents; and Ziemssen's encyclopædia, though a monument of wonderful compilation, will be always distasteful to American physicians, on account of their absolute repudiation in its pages; while Gross will be everywhere admired for his uniform impartiality and beautiful eclecticism.

The old Italian proverb, *ad ogni uccello, suo nido è bello*—to every bird its own nest is charming—is not practically admired by all American authors. One cannot but recall, in regard to many of them the Saxon aphorism: "It's an ill bird that soils its own nest."

ALUMNI ASSOCIATIONS.—The last number (Feb. 12) of the Philadelphia *Medical Times* contains a most astonishing editorial on this subject. It advises the members of such associations to obtain representation in the board of trustees, and "to force their alma mater" into such a line of policy or management, as the alumni may best approve.

It is safe to say that should an alumni association attempt such a course, it would be promptly and justly exterminated by the assailed institution which gave it birth.

The true course of all alumni associations should be exactly the opposite of that advised. Its members should be the fostering sons of their *alma mater;* ready to support her fully and strongly; holding all of their members who would dictate to the *alma mater* as forgetting their respective relations; and denouncing all who would insult or attempt "to force" her, as traitors and matricides.

The writer of that editorial states that in the medical department of the University of Pennsylvania "the faculty have sacrificed their pecuniary interests to the general weal." He also states, per contra, that "there are colleges which make no pretence of reform, into whose crowded rooms are gathered, and out of whose crowded rooms are annually discharged, into communities, large numbers of men, with but a show of regard to qualification; whilst the faculties receive princely incomes for a minimum of labor." This thrust at the Jefferson Medical College is palpable, and unquestionable, but to make the intent beyond dispute, the writer of the editorial suggests, that the alumni association of the Jefferson Medical College should "assert itself," and "asks if this were done, is it probable that that institution would remain as it now is, holding a position so well known, that it is not necessary to specify it?"

This in effect, and in fact, is the whole object of the editorial. The University is doing badly, and the Jefferson is doing so well that its faculty "receive princely incomes for a minimum of labor." In this emergency, the alumni association of the Jefferson Medical College is to be used; it is advised to "force" it *alma mater* into such a course, that, as a result, the Jefferson will no longer have the advantage of the University.

No one can read all this without indulging in a significant smile; and without wondering at the simplicity and transparent object of the author.

It is not Æsop, but some one equally forcible who tells a very amusing story of one of the tribe of Simiadæ (monkeys). This astute mammal had, as is alleged, some chestnuts on the fire and though these were sadly burning, he who placed them there to promote his gastronomic and corporeal happiness, had not the courage to remove them. In the emergency he espied a feline neighbor and with much eloquence and ingenuity prevailed upon his hapless and foolish friend to remove the burning chestnuts from destruction. The monkey saved his chestnuts, but, in the very dignified language of the modern drama, it may be asked, "Where's the cat"?

The University chestnuts are confessedly burning, but whether or not it can use the alumni association of the Jefferson Medical College as a cat's-paw on the occasion remains to be seen.

Another most amusing statement in the editorial mentioned is as follows:

"As a commercial transaction, the contract which is fulfilled when a student receives his diploma from an *ordinary* medical college leaves no one under obligation. The student has *paid* his fees to the professors, and received his knowledge and his right to practice, and that is the end of it. On the other hand, institutions properly endowed give more to the student than he gives directly back. To such an institution a student owes a debt, and he is morally bound until, by direct gifts, or by interesting others more able to give than he is himself, *or by enlarging the classes of his alma mater*, he has made return for that which has been bestowed upon him."

That is to say, the alumni association of the University is under obligation, but the alumni association of the Jefferson and of all *ordinary* colleges are under no obligations whatever; on the contrary, they should "force" their *alma mater* to do as they please. To all of which one, who appreciates logic, can only say, *quod est demonstrandum.* It is certainly very amusing to witness such transparent simplicity. The University of Pennsylvania should be saved from its friends, for they are rapidly making its attitude and its claims supremely ridiculous.

THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES seems to be in imminent trouble and danger. It no longer numbers among its members a single medical college in the New England States, or in New York State or city; but one in Philadelphia, and that one (the Jefferson Medical College) though honored with the Presidency of the Association since its creation is so far inimical to its interests as to have voted against the only measure of real reform (increasing the number of lecture terms) thus far attempted. The Baltimore and Virginia and Louisiana colleges will have nothing to do with the Association; St. Louis gives a limited support; Rush Medical College, Chicago, is about to resign; Nashville has repudiated the increased fee movement, and the trans-Mississippi has in part broken the shackles once sought to be placed upon it.

The American Medical Association tinkered for twenty years the gaping, unsightly wound which insufficient medical education represented on the medical body; but the work, like all tinkering, was so unfortunate that the last State was worse than the first. State Societies have also tinkered with no better results. And now, *eheu miserabile*, the College Association has proved to be the worst tinker of all. One may sadly say of its literature what Curran said in regard to the speech of a colleague: "*It is a long parenthesis*;" and when asked to explain, he added: "Why don't you know what a parenthesis is; it is something which may be omitted altogether without injuring the strength or sense of the matter."

But what is now to become of this vexed question of medical education? California and North Carolina and Illinois have in a great measure solved the problem. All States must do likewise.

MR. BERGH'S ANTI-VIVISECTION BILL.—It would be superfluous writing to demonstrate to the intelligent reader, the triumphs of vivisection, its beneficent results, and its great practical importance in the future; not only do intelligent physicians appreciate all this, but communities generally (occasional fanatics only excepted) have been made to understand its benefits to themselves and to humanity. There is one man prominent before the people of this country who does not, or can not, however comprehend these facts, and who is using his best influence for the purpose of preventing vivisection by law. Mr. Bergh has before the State Legislature the following bill, and if it passes there will be other fanatics endeavoring to force similar legislation in other States. Here is the bill:

AN ACT to prohibit the Vivisection of Animals.

The people of the State of New York represented in Senate and Assembly do enact as follows:—

SEC. 1.—Every person who shall perform or cause to be performed or assist in performing in or upon any living animal an act of vivisection shall be guilty of a misdemeanor.

SEC. 2.—The term "vivisection" used in this act shall include every investigation, experiment or demonstration producing or of a nature to produce pain or disease in any living animal, including the cutting, wounding or poisoning thereof, except when the same is for the purpose of curing or alleviating some physical suffering or disease in such living animal, or in order to deprive it of life when incurable.

SEC. 3.—This act is to take effect immediately.

If such a bill were to pass, its absurdities would at once be demomstrated and endless; there would no longer be produced in a State, horses, or steers, or wethers, or barrows, or capons; normal ovariotomy in its gastronomic results would be ended, and no one could even destroy the life of an animal for food purposes, unless such animal were diseased and "incurable." Bergh would be regarded as a monster surpassing even Falkenstein in danger and depravity; mankind would be overwhelmed by gastric vacuity and distress, and the sufferings of Tanner would measurably become illustrated in every household.

But jesting aside, this fanatic is endeavoring, with much promise of success, to secure the enactment of a law which would be the deathblow to all scientific institutions wherever it became operative; and European history demonstrates how popular such legislation is among the ignorant demagogues who make up a large part of every Legislative Body; how really dangerous indeed such a movement well a-foot may become. Bergh belongs to that class of fanatics once so common among the ignorant portions of the old Puritanical element in England and America—men possessed of that unexorcisable spirit which drives them to uproot every organization or movement which they do not, forsooth, approve, or can not understand; men who would regulate by law each man's religion, conscience, domestic relations, and altars; and all under the fanatic's or demagogue's plea of liberty!

All men should crush out this physiological fanaticism, born of ignorance and prejudice; but physicians should especially make its representatives impotent and ridiculous.

AN EXCELLENT MOVEMENT.—There is an effort being made in the New York Legislature for the establishment of incorporated institutions for pauper children, where they may be taught morally, as well as mentally, and be made self-supporting by learning some trade or handiwork; being retained until able to earn a livelihood for themselves. This mode of management would remove such children from the haunts of vice, idleness, ignorance and depravity, always abounding in cities, or towns, or in county poor houses, and make them eventually well trained and educated persons, contributors to the welfare of the State and no longer consumers of the public fund. As pauperism is on the increase, from business misfortunes and from immigration, as the poor must be always with every community, is this movement not the antidote for a poison which every where afflicts the Body-Politic? Is not the movement one which should be universal throughout this country? And should not doctors in State Legislatures and out of them use their influence for the correction of evils and the removal of dangers which they, of all in every community, best understand?

DEATH OF THE MEDICAL ACTOR AND COMEDIAN.—The ocean telegraph announces the death of the great comedian, E. A. Sothern, Lord Dundreary; his death having occurred in London on the 20th January. Sothern was a physician, was carefully educated for his profession and had spent two years of his life in the dissecting rooms and wards of the Middlesex Hospital. He died of cancer, and was treated by Sir James Paget and Sir William Jenner. It was known only to a few during his life that he belonged to the medical fraternity, and had left the rounds of practice to enjoy the well-merited rounds of applause.

THE ARKANSAS MEDICAL MONTHLY is about to be removed from Little Rock to Memphis, Tenn. Dr. Cross retires from the editorial staff, but Dr. Jones, the original editor, remains. May the new move be satisfactory and advantageous to its editor.

THE MISSISSIPPI VALLEY MEDICAL MONTHLY (formerly the Arkansas *Medical Monthly)*, published at Memphis, Tenn., and *The Indiana Medical Reporter*, published at Evansville, Ind., are each competing for the patronage of the Mississippi and Missouri Valleys. The first journal is issued as a 48-page monthly, at $1 per year, and is managed without "a staff" editorial; the latter journal is also issued as a 48-page monthly, at $2 per year, and is managed with an editorial "staff;" the difference of $1 more on each subscription being regarded in the latter case as returned to the subscribers by the labors of "the staff." The first plan will be found on trial to be the best for both editors and subscribers.

This journal had once the ablest "staft" connected with any journal in the world; it contained such distinguished gentlemen as Drs. S. H. Dickson, Alfred Stillé, T. G. Thomas, J. C. Cabell, Lewis Sayre, Paul F. Evie, F. H. Hamilton, S. Chaillé, and several others. It was found, however, that these gentlemen were too much overburdened with their immediate professional work to aid in the arduous work of journalism; and as under such circumstances the publishing of their names could only mislead the Public in supposing that it was to gain what it could not gain, due explanation was made and the "staff" was discontinued. So it must be in almost all cases. The editorial work is done and must be done by one or at most two persons, and the fewer such laborers, the more harmonious the results.

It is hoped that both of the journals mentioned may reap a success far beyond their hopes, but if an old journalist may be permitted to express an opinion it is that the editorial work which is confided to the fewest, will be most harmonious and successful. Both of these journals issue monthly, at present, 5,000 copies. How many of these are sent to bona-fide subscribers is not stated. May each journal sent find a steady supporter.

AMUSING.—A physician publishes in a western journal a manifest case of pleurisy which he failed to diagnosticate, but found at the post mortem of the ignorantly treated patient, one pleural sac filled with fluid. He writes thus: "As to how the *lung* could have taken on this action and become *entirely dissolved*, without *producing* any pus, or any disagreeable odor, I am unable to offer an opinion. I would be glad to have the opinion of others upon it." Well, it is useless to offer any opinion of the case, as there can be no doubt as to its character, but one can give an opinion as to the doctor who treated it; and this opinion can best be given in the witty remark of Charles Lamb, "the more I think of such a man, the less I think of him." The result will, however, be dangerous, if there be as much *Fite* in his nature, as there is in his name.

THE CO-ORDINATE WORK OF MEDICAL COLLEGES has proved to be a failure. The association of medical colleges established for this purpose was based upon a fallacy. Assuming that there were abuses to be reformed, the representatives of such abuses were made in part the court to try and correct them; such offenders were to be the criminals, the judges and the jury!! The effort was futile; it was trying "*ex fumo dare lucem.*" The failure is patent, if not confessed; confession will follow the verdict. What are the medical colleges to do? The reply is simple. To do the best teaching possible. To raise the standard for graduation gradually, but progressively. To obtain the best fees practicable for each locality. Each college acting as a unit; responsible only to its trustees and to the profession; certainly not to other colleges, who being interested judges cannot be impartial. The best teaching, adequate fees, a progressive standard for graduation, independent, unitary work, with a declared, honest responsibility to the profession. This is the secret of success. This *must* be the test of each institution. To the profession it can only be said, "By their fruits ye shall know them."

Meanwhile each State should, like Illinois, California, and North Carolina, have its own examining Board, whose operation, not retro-active in character, would progressively and eventually eradicate the protœan evils of inefficient and insufficient medical education.

K. OF THIS JOURNAL, whose translations, abstracts, reviews, news items, etc., have given so much pleasure to the readers, not satisfied with the absolute happiness always attending, of course, the labors of a journalist, must needs seek a happiness still more perfect; he has sought this in marriage, the ceremony having taken place in this city on the 10th of February. Well! may he and his good wife (*née* Miss Jennie Trumper, of this city) find even more than they anticipated and may they in their new home at Chicago receive from all who meet them that kindness and courtesy of which they are both so worthy.

Dr. J. G. Kiernan goes to Chicago, to become one of the editors of the *Chicago Review*; work for which he is peculiarly and eminently well fitted. That he will bring increased success to that excellent and meritorious periodical is earnestly wished and confidently expected. He will still contribute to the pages of this Journal. He and this Journal are only separated; certainly not divided. Success and happiness attend him and his bride, and a warm welcome for him by the brethren of Chicago.

PICKING.—The dangers of picking off men on picket; of "picking cotton" in the malarial seasons; of "picking one's way" in the dark, etc., are all confessedly great, but they are small indeed, when compared with the dangers of "picking type." The compositor needing two ·letter tt picked them from the words *articulo mortis* on page 96 of the last number, and these words consequently appeared, most unhappily, deprived of the letter essential to a correct orthography. They came out as do so many soldiers after a skirmish, minus their integrity. Oh, the horrors, after weeks of labor, of having the Journal for January looking in these respects mentioned as though the editor had written that paragraph after his Christmas dinner, or the compositor had set it up, after an unsuccessful operation upon him for double cataract. The table of contents contained several typographical errors which it is hoped will not occurr again.

"THE RT. HON. LYON PLAYFAIR."—Such is the manner in which the London *Times* alludes to Dr. Playfair the distinguished obstetrician, who in the existing debates, recently occurring in the British House of Commons, was made deputy speaker of that body. The author of Playfair's midwifery is as remarkable for his humor as he is for his medical erudition. It seems that in the debate, Mr. Millbank (a member) termed Mr. Biggar (also a member) "a scoundrel." The speaker, Dr. Playfair, being appealed to preserve order, ruled that "it was the duty of Mr. Milbank to apologize to the house for calling Mr. Biggar a scoundrel, but not to Mr. Biggar." Mr. Millbank then made his apology "in accordance with the mode prescribed by the speaker." It was a delivery in three stages.

THE MEDICAL GOVERNOR OF KENTUCKY.—Dr. Luke P. Blackburn predicts an epidemic of cholera, because there has been an epidemic of influenza. As an excess of ozone in the atmophere is a coincidence if not the cause of influenza, and as cholera is always preceded by a deficiency of ozone and this deficiency exists during the cholera invasion, the force of the governor's logic is not overwhelming. The fact is Dr. Blackburn, for his heroism in the yellow fever epidemic, is a great governor among doctors, and a great doctor among the governors, and if he not content with this eulogium, would have the statement reversed, he should not indulge in his pet theories or pet predictions. His advice that cholera should be averted from a people, by a bibulous indulgence in cistern water needs no comment. Some of the worst epidemics of cholera in this country occurred in Charleston, S. C., where the inhabitants drink cistern water exclusively.

THE ADVERTISEMENT OF KIDDER'S ELECTRO-MEDICAL APPARATUS was accidentally omitted in the last issue. Readers will find it to their interest to examine it. The apparatus enjoys great confidence among those familiar with it.

MALTINE.—There are two new pages of advertisement in regard to Maltine in this number. Maltine and the compounds of Maltine, made by Messrs. Reed and Carnrick, have become entirely standard preparations known to all of the profession and justly entitled to absolute confidence.

COMPENDIUMS.—This is the era for compendiums. There have been compendiums in chemistry and materia medica, in obstetrics, and even in physiology and anatomy. Now the craze is for compendiums in surgery, and even in the practice of medicine. The effort is being made, not "to hoard up the wisdom of the dead"—to perpetuate the records of the brilliant and the learned, but to compress the grand material for a quarto into the petty dimensions of a primer. And it may be said, as to the result, that in the most recent efforts at compendiums, the matter presented bears about the same ratio to the matter essential for each subject, that a chronological table does to history! And yet the medical press not infrequently declares such works to be "practical," "unburdened with learned lumber," etc. The great science of medicine degraded into a few rules belonging properly only to its art, and medical history so thoroughly expunged from the records, as to become only a memory!

WOMEN'S LEFTS.—There have been so many exciting debates in regard to women's rights, in medical societies, that the following dialogue, extracted from London *Punch*, might be read profitably by many: "Confidential Friend (to elderly and not unattractive spinster)—'So you've given up advocating women's rights?' Elderly Spinster—'Yes; I now go in for women's lefts.' Confidential Friend—Women's lefts! What's that?' Elderly Spinster—Widowers, my dear!'"

THE PREMIUM OF CHAMBER'S ENCYCLOPÆDIA is still offered to every subscriber, old and new, who forwards $10.50. *This Journal gives the Encyclopædia for* $2.00 *less than the price charged by the Publishers.* The Encyclopædia is in fifteen volumes, well bound in cloth, containing each nearly 900 pages, and is an exact reprint of the very latest London edition.

GAILLARD'S MEDICAL JOURNAL.

(*Formerly the Richmond and Louisville Medical Journal.*)

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ORIGINAL ARTICLES.

"Qui Docet Discit".

The Treatment of Pneumonic Fever (Acute Lobar Pneumonia) by the Employment of the Wet-Sheet. From a Clinical Lecture,* Jan. 14th.

By AUSTIN FLINT, M. D.

Gentlemen, I have presented during this session already two cases of pneumonic fever, treated antipyretically by means of the wet-sheet, no other active measures of treatment having been employed. The favorable course of the disease under this treatment, in these cases, was highly gratifying. I have now to present a third case treated in the same manner, the course of the disease being equally gratifying. Inasmuch as these cases are but a small proportion of those which have been treated in my wards during the session, you may ask why the treatment has been thus limited. The treatment is, as yet, novel in this country. In relating the first two cases at a meeting of a medical society of which I am a member, doubt was expressed by other members as regards a favorable influence produced by the treatment, together with distrust of its propriety and safety. I was not without apprehensions, in the first place, in respect of the treatment itself, and, in the second place, as taking the place of other therepeutical measures, notwithstanding the strong testimony of some German writers in behalf of the efficacy of cold baths in this disease. These considerations led to a careful selection of cases. The cases selected were those in which the disease was in an early stage, the patients apparently robust, the pyrexia considerable or high, and no complications existing. I am by no means sure that the treatment might not have been employed in other cases with advantage, but it was thought best to select cases in which there was the least likelihood of harm were the effect not satisfactory.

The cases were selected by Dr. J. N. Möller, house physician, and the treatment pursued under his direction. The first and the third case were treated during my term of service; the second case was treated during the service of Dr. Janeway. I suppose that many of you, gentlemen, took notes of the two first cases when they were presented to the class. I shall, however, repeat the important facts in the histories of these cases, and then present the case which has recently been treated. Dr. Möller has furnished me with a report of all the cases.

Let me state before hand the plan of treatment which was pursued. The directions were to employ the wet-sheet whenever the axillary temperature exceeded 103° Fahr. The patient was wrapped in a sheet saturated with water at a temperature of about 80° Fahr., the bed being protected by an India, rubber covering. Sprinkling with water of about the same temperature was repeated every fifteen or twenty minutes. If the patient complained of chillness, he was covered with a light woolen blanket, which was removed when the chilly sensation had disappeared. In none of the cases was the blanket used much of the time while the patient was wrapped in the wet-sheet. The patient remained in the sheet until the temperature in the mouth fell to 102° or lower, care being taken to watch the pulse and other symptoms. When the temperature was reduced, the wet-sheet was removed, and resumed if the temperature again exceeded 103° Fahr.

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* The "short-hand" reporters have voluminously furnished to a large number of journals, so much absolute trash as "lectures," from well known teachers, that this Journal, will in future, publish none of these contributions. Only "lectures" directly contributed by the lecturers, or coming with their approval, and after their supervision, will be issued in the pages of this Journal. The present lecture comes directly from the author of it.—ED.

Case I.—R. K., aged 21, a native of the United States, a cooper, was admitted September 29, 1880. He enjoyed good health until three days before his admission, when he was suddenly seized with a severe chill followed by fever and a sharp pain in the left side near the nipple. The fever and pain increased in severity, and he soon began to cough. He complains now of pain, cough, headache, and dyspnœa. His expression is anxious and the face flushed. The axillary temperature is 104.50° Fahr. The respirations are accelerated and panting. Pulse 120°. Expectoration viscid and tinged with blood. There is dullness on percussion over the lower lobe of the left lung, with increased vocal fremitus and bronchophony. The respiration is bronchial.

The patient is to be placed in the wet-sheet whenever the temperature is above 103° Fahr., and, is to be sprinkled with water, at a temperature of between 80–85° Fahr., every fifteen minutes; and is to remain in the sheet until the temperature falls to 102° Fahr. The temperature, while he is in the sheet, is to be taken in the mouth.

September 30th.—Temperature in the morning 104°. The patient was not at once put in the sheet, as the arrangements for employing it were not complete. At 12 M., the temperature being 105°, he was wrapped in the sheet and kept in it two hours and forty-five minutes, the temperature meanwhile having fallen to 102° Fahr. At 3:30 P. M. the temperature was 103.50°, and the sheet was again employed as before. At 4 P. M. the temperature was 103.50°. At 5 P. M. it was 101 50° and he was taken out, having been in the sheet one hour and a half. The temperature at 6 P. M. was 104°, and at 6:30 P. M. the sheet was again employed. At 7:40, the temperature being 102°, he was taken out, having been in the sheet one hour and ten minutes.

October 1st.—The physical signs continue the same. The respiration is purely bronchial, and a few crepitant râles are heard. The temperature at 8 A. M. 100.75°; at 12 M. 104°, and at 12.45 P. M. 104.25°. The patient was placed in the sheet and kept in it one hour, the temperature in the meantime having fallen to 102°. Whiskey ℥ ii. was directed to be given every two hours, and five grains of the carbonate of ammonia every two hours. The diet to consist of milk and eggs. Morphine sufficient to relieve pain. The temperature at 3 P. M. was 102.25°; at 6 P. M. 101°.

October 2d.—Physical signs continue the same. Temperature at 8 A. M. 102.25°; at 12 M. 103°; at 3 P. M. 102°, and at 6 P. M. 101.25°. The wet-sheet was not used on this day, as the temperature did not rise above 103° Fahr.

October 3d.—The patient was delirious last night, and once got out of bed. Temperature at 8 A. M., 103.25°. The patient was placed in the sheet and kept there one hour. The temperature had then fallen 100.25°. The temperature at 12 M. 102.25°; at 3 P. M. 102°, and at 6 P. M. 101.25°. Physical signs remained the same. The expectoration was rusty in color.

October 4th.—The patient was somewhat delirious last night. The dullness on percussion remains the same, a few subcrepitant râles are heard. The temperature at 8 A. M. 99.25°; at 12 M. 98.50°; at 3 P. M. 97.50°, and 6 P. M. 97.50°. The patient vomited once during the day.

October 5th.—The patient slept well last night. Subcrepitant rales are more abundant. The respiration has some vesicular quality. The temperature at 8 A. M. 97°; at 12 M. 97.25°, and at 6 P. M. 97°. The expectoration consists of thick yellow mucus.

October 6th.—The temperature in the morning 97°. The patient slept well last night. Respiration broncho-vesicular. The carbonate of ammonia in doses of gr. v. was given every three hours, and an ounce of whiskey three times daily. The temperature in the evening 97.50°.

October 7.—The physical signs indicate a small amount of effusion in the left pleural cavity. Respiration over the affected lobe is broncho-vesicular. Very few subcrepitant râles heard. The carbonate of ammonia is discontinued and the whiskey continued. The patient sleeps and eats well. The temperature is normal.

December 10th.—Respiration nearly normal, no increase of vocal fremitus, nor of vocal resonance. The patient is up and pronounced convalescent.

Summary.—The patient entered the hospital on the third day after the attack. On the second day after his entrance the wet-sheet was employed thrice. He remained in the sheet the first time, two hours and forty-five minutes; the second time, an hour and a half, and the third time an hour and ten minutes. On the second day the wet-sheet was employed once, and continued for one hour. On the third day, the wet-sheet was not employed, the temperature not rising above 103°. On the fourth day, the wet-sheet was employed once, and continued for an hour. There was complete defervescence on the fifth day, and no return of the fever afterward. Dating from the attack to the cessation of fever, the duration of the disease was seven days. The patient had no treatment prior to his admission into the hospital. The treatment in the hospital, in addition to the employment of the wet-sheet, consisted of carbonate of ammonia in moderate doses, whiskey given very moderately, and a little morphine. The patient was up and dressed five days after the date of the defervescence. There were no sequels, and the patient was discharged well.

CASE 2.—M. C., aged 35, a native of England, domestic, was admitted on November 30, 1880.

She enjoyed good health prior to her present illness. On November 2d she exposed herself by going out in the open air thinly clad; and during the following night (Nov. 23d) she had several slight chills, followed by fever and pain in the left side of the chest. November 24th she remained in bed complaining of fever, pain, dyspnœa, and a dry cough. She soon began to expectorate white tenacious mucus, which speedily became darker in color. She now complains of the above symptoms. The face is flushed and has an anxious expression. The temperature is 103.25° Fahr., pulse 120 per minute, respiration 40 per minute. There is dullness on percussion over the whole of the left side of the chest posteriorly, with bronchial respiration, increased vocal fremitus, bronchophony and abundant crepitant râles. There is relative dullness over the left side anteriorly, with broncho-vesicular respiration and increased vocal resonance. Whiskey ℥ ss every two hours is directed, with opium to allay the pain, and the carbonate of ammonia grs. v. every two hours. The diet is to consist of milk and eggs. The patient is to be placed in the wet-sheet whenever the temperature is 103.50° Fahr. Temperature at 6 P. M. 102°, pulse 106, respiration 26; at 9 P. M. temperature 100°, pulse 100, and respiration 20; at 12 P. M. the temperature 100.75°, the pulse 90, and the respiration 22.

December 1st.—The patient slept fairly during the night. Temperature at 3 A. M. 101°, pulse 80, and respiration 20; at 6 A. M. temperature 102.75°, pulse 100, and respiration 23; at 8 A. M. temperature 103°, pulse 100, and respiration 23; at 9 A. M. temperature 102°, pulse 105, and respiration 30, and at 12 M. temperature 102.25°, pulse 106, and respiration 33. The expectoration is viscid and rust colored. Temperature at 3 P. M. 103.25°, pulse 116, and respiration 40; at 6 P. M. the temperature 104°. Patient was placed in the wet-sheet, and while in the sheet the record of the temperature, taken in the mouth, was as follows: 7 P. M. 103.75°; at 8 P. M. 103.25°; at 9 P. M. 102.75°; at 10 P. M. 102.75°, and at 12 P. M. 102°. Patient was taken out of the sheet. Time in the sheet, six hours.

December 2d.—The temperature at 1 A. M. 103°, pulse 104, respiration 28; at 2 A. M. temperature 102°, pulse 105, respiration 36; at 3 A. M. temperature 101.25°, pulse 104, respiration 35; at 5 A. M. temperature 101.25, pulse 100, respiration 20; at 7 A. M. temperature 101.25°, pulse 90, respiration 18; at 8 A. M. temperature 98°, pulse 90, respiration 16; at 9 A. M. temperature 99°, pulse 94, respiration 16, and at 4 P. M. temperature 98°.

December 3d.—Temperature in the morning 98°. A few subcrepitant râles are now heard. Temperature in the evening 99°.

December 4th.—Temperature in the morning 98°. The subcrepitant râles are more abundant. Temperature in the evening 99.25°. Patient feels much improved.

December 5th.—Temperature in the morning 98.50,° and in the evening 99°.

December 6th.—Temperature in the morning 98°. Patient complains of hunger and was allowed beef tea and chicken broth. Temperature in the evening 99.25°.

December 7th.—Temperature in the morning 98°. Dulness on percussion less and respiration has vesicular quality. The patient wishes to get up.

December 10th.—The temperature has been normal since last note.

December 27th.—The patient has entirely recovered and is discharged.

Summary.—The patient entered hospital seven days after the date of the attack. She had had no medical treatment prior to her entrance. The wet-sheet was employed on the second day after her admission, and continued for six hours. Complete defervescence took place on the third day. Recovery followed without any drawbacks. Both lobes of the left lung were involved in this case. The invasion of the second lobe, probably, was about the time of her admission into hospital.

CASE 3.—J. O. N., aged 49, a native

of Ireland, fireman; was admitted to Bellevue Hospital January 25th, 1881. He was perfectly well prior to January 20th ; at noon on that date he was seized with a severe chill, followed by fever, cough and pain near the left nipple. On Jan. 22d he was obliged to stop working owing to increasing dyspnœa and general weakness. He had had no medical treatment prior to admission. He now complains of weakness, dyspnœa, pain in chest, cough and anorexia. There is circumscribed redness on both cheeks. The temperature is 103°, the pulse is 104°, and the respirations are 42. There is dulness on percussion over the lower lobe of the left lung, with increased vocal fremitus, bronchial breathing, bronchophony and crepitant rales. The sputa are opaque and viscid.

Morphia is directed to relieve pain, whiskey ℥ ss. every three hours, and a diet of milk and eggs. He is to be placed in the wet sheet whenever the temperature rises above 103°, to be kept in the sheet until the temperature in the mouth falls to 102°, and to be sprinkled every 15 minutes.

January 25th.—Temperature at 7 A. M., 103.25° in axilla, and he was placed in the sheet. At 8 P. M. temperature 103° in mouth ; at 9 P. M., 102.75° ; at 10 P. M., 102.50°; at 11 P. M., 10.250°; at 12 P. M. 102.50°.

January 26th.—At 1 A. M., 102.75° ; at 1 A. M., 102.50°; at 2 A. M., 102.50°; at 3 A. M., 102.50°; 4 A.M., 102.25°, and at 5 A.M., 101.25°. He was now taken out of the sheet, having been in it 10 hours.

The temperature at 8 A. M. 103.25° in axilla, and at 10 A. M., 103°.

Expectoration rusty ; pulse, 80 ; respiration, 36. The temperature at 12 A. M., 103.25° in axilla, and he was again placed in the wet sheet. At 1 P. M. the temperature in the mouth was 102.75°; at 2 P. M., 102.50°; at 3 P. M., 102.50°; at 4 P. M., 102.25°, and at 5 P. M., 101.75°. Pulse, 88; respiration, 36. Taken out of the wet sheet, having been in it 5 hours. The temperature at 7 P. M., 102° axilla; at 9 P. M., 99.75°, and at 11 P. M., 99.50°.

January 27th.—The temperature at 1 A. M. was 99° in the axilla; at 3 A. M., 98.75°; at 5 A. M., 98.50°; at 8 A. M., 98.75°, and at 10 A.M., 98.75°. Rested well last night and feels much improved. Is bathed in perspiration. Subcrepitant râles are now heard. There is a vesicular element in the respiration. Sputa less rusty. Pulse 84. Respirations 28. The temperature at 12 M. was 99.50° in axilla; at 2 P. M., 99.50°; at 4 P. M., 99.50°; at 6 P. M., 100.25°; at 8 P. M., 100.25°; at 10 P. M., 100.50°; at 12, midnight, 100°.

January 28th.—At 2 A. M., 99.75°; at 4 A. M., 99°; at 6 A. M., 99.50°; at 8 A. M.. 99.25, and at 10 A.M., 99.75°. Pulse 80. Respiration 28. Sleeps well. Perspires freely. Sputa slightly tinged with blood. Resolution continues. Temperature at 4 P. M,, 100.25° in axilla.

January 29th.—Temperature in the morning, 99.50° in axilla; in the evening, 100°. Resolution more advanced.

January 30th.—Temperature in the morning, 99° in axilla, and in the evening, 99.50°.

January 31st.—Temperature in the morning, 98.50°, and in the evening, 99.25°.

February 1st.—Temperature in the morning, 98.25°, and in the evening, 99°.

February 2d.—Temperature in the morning, 98.50,° and in the evening, 99°.

February 5th.—Temperature has remained normal. The patient is up and on regular diet. Respiration and the vocal resonance are normal. Slight pleuritic friction-murmur is heard near the base of the lung.

SUMMARY.—The patient entered hospital three days after he was obliged to give up work. On the day of his entrance the wet sheet was employed, and continued for ten hours. The wet sheet was employed on the second day after his admission, and continued for five hours. Defervescence took place on this day. The duration of the fever was five days, dating from the time he was obliged to give up work, and seven days from the occurrence of chills and pain in the chest.

The histories of these cases, gentlemen, as bearing upon the treatment employed, have for me, as I doubt not for you, much interest. They certainly show that in cases like those which were selected, the treatment is not hurtful. More than this, they render probable the inference that the disease was controlled and brought speedily to a favorable termination by the treatment. They also go to show that the disease is essentially a fever, and that treatment is to be directed to it as such, and not as a purely local pulmonary affection. It remains to be determined by further observations how often and to what extent this method of treatment has a curative efficacy. It is also an important object of clinical study to ascertain the circumstances which render the treatment applicable to cases of pneumonic fever, and, on the other hand, the circumstances which may contra-indicate its employment in this disease.

Case of Pneumonic Fever, the Patient Lying out of Doors for Three Days; Defervescence on the Fifth Day, and Rapid Convalescence.

The following case came under observation after the foregoing article was in type. The case was presented at my clinic, February 25th. The report has been furnished, and the treatment was directed, by Dr. Möller, house physician of the third medical division, Bellevue Hospital:

William S., aged 19, England, shipbuilder, was admitted, February 21st, 1881.

The patient has always been a sober industrious man, of a strong constitution, and with good health. His occupation necessitates much exposure, and he is often obliged to work all day in wet clothing. His present illness dates from the 18th inst. It began with a well pronounced chill, fever, headache, pain under the left nipple, cough, and a feeling of general prostration. Being without a home, he spent the time from the 18th inst., to the morning of the 21st inst., in a lumber yard without food, and with no shelter but a pile of boards. During this time there was a snow storm of considerable severity, and the temperature fell as low as 10° Fahr.

On admission there is a dusky redness of the face, and the expression is anxious; pulse 122, respiration 52, temperature 102.25°. He complains of dyspnœa, pain in left side and cough. The expectoration is semi-transparent, adhesive, and has a reddish tint.

Physical Examination.-Increased vocal fremitus, dullness, bronchial breathing and bronchophony, are obtained over the lobe on the left lung.

Treatment.—Whiskey, ℥ ss., Ammoniæ Carb., gr. v. every two hours, and a milk diet. Temperature in the afternoon, 104.25°F.

February 22d.—Temperature, A. M., 99°; P. M., 99.25°. Pulse 115° and feeble. Ordered Tr. Digitalis, gtt. x. every three hours.

February 23d.—Patient's condition has improved. All the signs of solidification are yet present, and the crepitant râle is heard behind. Pulse 70 and full. Digitalis discontinued. Respiration 32. Flush has disappeared from the face.

February 24th.—Temperature, A. M., 98.25°; P. M., 98.25°. The physical signs now show beginning resolution. Dulness is less marked, bronchial respiration has given place to broncho-vesicular, bronchophony to increased vocal resonance, and the subcrepitant râle is frequently heard.

February 25th.—Patient feels much better. Temperature, A. M., 97.50°. Has a good appetite, takes beef tea and milk.

February 28th.—The patient is up and dressed.

REMARKS.—Two inquiries suggest themselves in connection with the history of this case. One is, did the disease end from an intrinsic tendency to recovery in spite of the circumstances under which the patient was placed for the first two days of his illness? It is, of course, absurd to suppose that the disease was arrested by the whiskey and ammonia which were given after his admission into the hospital. The second inquiry is, did the exposure in the open air for three days shorten the duration of the disease by means of an antipyretic effect? These inquiries are submitted without discussion for the reflection of the reader.

"*Climate Cure.*" *Winter Resorts. South Florida.* By JOSEPH P. LOGAN, M. D., Atlanta, Ga.*

Notwithstanding the advances in therapeutics, it is the admission of all intelligent and honest medical men, that we have no uniformly reliable results from the treatment, by drugs, of that fell destroyer of the human race, Tubercular Consumption; and to a certain extent the same conclusion is true in regard to some other chronic diseases; as certain forms of Bronchitis, Catarrh, Asthma, Rheumatism, and Neuralgia; and upon the other hand, that the most striking and satisfactory ameliorating and curative effects are being constantly obtained from the influences of climate in these maladies; and especially so, in the proclivity to and incipient development of the first mentioned. It is, therefore, a matter of the deepest interest to the medical profession and to a large portion of our people to determine where such conditions are to be found, as will, with even strong probability, furnish such a result as can properly be called "climate cure."

Without undertaking to cover the whole ground embraced in the subject under consideration, or to engage for the present in the discussion of the speculative theories now so rife, in regard to the details of special influences of climate upon disease, I propose as a rule, in general terms, that the best climate for the invalid suffering from any disease, is that which furnishes, the largest opportunity for interesting, comfortable and healthful outdoor exercise, thoroughly ventilated sleeping rooms, and in which there is the least necessity for burdensome clothing.

While for many years the weight of evidence in favor of the State of Florida, as furnishing these conditions to a higher degree than any other portion of the United States, has been very decided, yet owing largely to a want of careful discrimination upon the part of medical advisers in sending persons in the fully developed or advanced stage of consumption to that State, and the natural anxiety of even the most hopeless sufferers to exhaust every possible resource in the effort to prolong life, doubts as to the real advantages of that region have arisen, and repeated efforts have been made by enthusiastic members of the medical profession, to establish a climatic sanitarium elsewhere.

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* It is due to Prof. Logan to say that this article was ready for an earlier issue, but that it has not appeared from the fact of the space being pledged to others.—ED.

At various times it was to be found, among the snow and ice of Minnesota, the great elevations of Colorado, the plains of Western Texas, or the sand hills and uplands of South and North Carolina, or Georgia, but the writer is strongly impressed with the conviction, after a number of years consideration of this subject and such opportunities of observation, as in his judgment authorize him to put upon record, the opinion, that all these attempts will in a large majority of cases of tubercular disease, and more strikingly so, with reference to the other diseases to which reference has been made, prove illusive.

His testimony is, that while from the causes mentioned and the want of judgment in various ways upon the part of sufferers from these diseases, who have made the experiment, and we regret to say, the want of moral courage (to which the writer pleads personally guilty) in facing and presenting the inevitable to our patients, respectable professional and popular doubts as to the efficiency of the climate of Florida, as a remedy for consumption, have arisen; yet the drift of the sentiment of both classes, within the scope of his observation, is more marked at the present hour in favor of the idea that no where else in this country is to be found the same reliable evidence as to the value of climate cure in disease, and specially in consumption as that which has been accumulating for many years in regard to the State of Florida. That there is a decided exemption from tubercular consumption, as originating, in Georgia and other Southern States in same latitude as compared with the northern sections of the United States and that many persons in the incipient stage of the disease or with a proclivity in that direction, in the north, have been greatly benefitted by a removal to the milder and more genial climate of almost every portion of the Southern States and especially in Georgia and the Carolinas, is doubless true, but that this advantage has been mainly due in this region to the greater opportunity of exercising in comfort and safety in the open air and to the escape from the noxious influences of a long winter residence in close and heated rooms, rather than to any specific curative influence of the climate, there is no doubt.

That thousands and tens of thousands of delicate people with an inherited or acquired proclivity to consumption and many cases even of the actual incipient development of the disease in the more northern sections of the United States and to a more limited, yet appreciable extent, even in this section (where our winters are characterized by frequent northeastern storms of rain, alternating with sharp northwestern winds) may have their terms of life greatly prolonged and in a large proportion of cases escape a fatal result from the disease, by a permanent removal to, or a residence for the entire cold season in the State of Florida, upon the principle already alluded to, and to a much greater degree, and possibly to some extent to an additional curative influence in the climate, is established by many well authenticated instances of such results, some of which, the writer may undertake to put upon record, at some future time, if they can be gathered up in proper professional form.

As to the result, however, of the plan adopted by most persons of spending a few weeks or months in Florida, and especially of deferring their departure from inhospitable climates for a winter residence in this more genial region, until they have been subjected to an attack of cold or bronchitis, as the result of the inclement weather of the early winter, and then returning in the months of spring, when the climatic changes are greater and more trying than at any other period of the year, I have nothing favorable to say, and believe that the only fair test of the influences of the climate can be realized by spending the entire cold season, say from the first of November to the last of May, or by residing there the entire year in some readily-found locality free from malaria.

And now that the wonderful success of semi-tropical fruit culture is established beyond controversy and a most pleasant, profitable and suitable occupation is found, even for the invalid, who is not entirely disabled, and with the admirable attractions afforded by the abounding game for hunting and the charming small lakes teeming with fish for boating and angling, and with the opportunity to almost literally live out doors (the desideratum for the consumptive invalid) with something constantly to interest, and with no time hanging heavily upon the hands or for brooding over disabilities, it would seem that a very bonanza of health, pleasure and wealth, even for the invalids, has been found.

After visiting Florida a number of times, and regarding the whole State as more or less favorable in the climatic advantages offered, I would state that these are combined to a greater degree than in any other accessible and improved section, in that portion of the peninsula known as *South Florida*, and especially in the County of Orange, with parallel and more southern counties to the region of Tampa upon the gulf coast, extending far into the interior, embracing hill and dale and large bodies of rolling, majestic pine, oak and magnolia forests and many beautiful, sparkling lakes, which, in that region where evaporation from and percolation through the soil, is very extreme, furnish in connection with the soft and charming breezes from the Gulf or Ocean, a desirable humidity in the long intervals between the rains, characteristic of that section during a large part of the year, and to such extent specially in the winter, as to constitute it the "dry season" as compared to the "wet season" from July to September. But even during this rainy season, the testimony of those who have resided the entire year in the county is not unfavorable, and indeed it is regarded by many as the most pleasant season, as there are constant alternations of showers, sunshine, Ocean and Gulf breezes and no such extreme heat as is constantly formed in the Northern States, in regard to which a recent correspondent states, that though a resident of Florida, he has spent a portion of the last six years at the North and finds it cooler where he resides than there, and will never again leave Orange County in summer for a more comfortable climate. This, however, I have not personally tested, and while an important fact, if true, to those who propose to reside in the country, is not necessary to the advantages of the climate for the cold or dry season, to which I have special reference in this article. Without then intending to ignore the advantages of the winter climate of the Southern States generally, and especially the piney and sandy sections of Georgia, the Carolinas and Northern and Middle

Florida, and in some exceptional seasons of the San Antonio regions of Texas, my advice to the invalid seeking a reliable and genial climate for the cold season, is to ship from Jacksonville (the point of steamboat departure from the upper or lower St. Johns River, as you may prefer to term it,) two hundred miles by water for Sanford, or Enterpise, or that magnificent expansion of the St. Johns, called Lake Monroe, at the head of large steamboat navigation. And as the invalid will not go where he cannot find comfortable accomodations, it is well to state that here and in the adjacent sections of park-like rolling pines in the counties of Orange and Volusia, good hotels and boarding houses have already sprung up, where but a few years ago was a primeval forest. At Sanford you find a smart and active little town with steamboat and telegraphic facilities the world over. Also a railroad in operation for twenty miles into the beautiful interior to Onlands, the county seat of this region, felicitously named "Orange," along the track of which is a section bearing the name of Lake Maitland, which six or eight years ago was a picturesque wild, but to-day from the rapid improvement of its affluent advantages, is one of the most attractive localities in the sunny State of Florida, and combines within itself as much of promise as any other spot in that nearly tropical region. Where but a few years ago was a part of a wilderness of hundreds of thousands of acres of United States land, in consequence of its rapid subjection to homestead by perhaps the most intelligent and substantial population which has ever settled upon any portion of the Government lands, are now the marks of an advanced civilization, as exhibited by handsome and costly dwellings and magnificent orange groves, subjected to the highest degree of culture. Here, below the point of injurious frosts, as has been most strikingly demonstrated during the recent almost unprecedented cold, is the home of the orange, lemon, lime and pineapple, flourishing as they do in the open air during the winter in a climate which is truly semi-tropical. The pioneer hotels of this newly settled and attractive region are already representing themselves as catering to the wants and tastes of tourists and invalids by large, tasteful and costly buildings commanding a view of lake and other scenery and in the midst of orange groves, with various facilities for their amusement, such as boating, fishing, hunting and riding, with elegant furniture, and their tables supplied with enticing bills of fare.

But, however necessary, attractive and useful such public houses are, it is not in luxurious and crowded hotels that the highest conditions for health anywhere, and especially for "Climate cure" are found, and instead of lounging in the hotels of Jacksonville, St. Augustine, and many other points of interest to the mere pleasure seeker upon the St. Johns or in this region, I would advise as an important factor in a thorough test of this climate, at least in diseases of the lungs, that the invalid should be as much segregated as possible, and where practicable that he should have his own house, however simple and inexpensive it may be, and that it should be surrounded by groves, gardens and vineyards as an interesting and valuable resource for both pleasure and profit to the health, even if there should be no occasion for it, to the pocket.

To the invalid desiring to obtain the fullest advantage of the climate by becoming a permanent or temporary settler, assurance is given in the desire of the people to increase the population and the immense body of unoccupied land, not in the particular section only, alluded to, but throughout a large territory of similar country embraced in Orange and other counties extending far away southward to Ocean and Gulf; not so advanced in improvement (much of it being yet unoccupied Federal and State Government land), and perhaps with somewhat less attractions in beauty of landscape, but in all essential particulars equally advantageously for settlement. And as every feature and characteristic of the country has more or less bearing upon the practicability of testing its climatic advantages, it is stated by those who reside in the country that it will profitably produce in addition to a great variety of semi-tropical fruits, corn, sugar cane, long staple cotton, rice, tobacco, sweet and Irish potatoes, arrow root, cassava, and all the usual vegetables, and of late, that the grape has been introduced into this section with the most favorable results, and thus certainly this sunny, golden peninsula has a bright and enticing future before it.

The retired business man of wealth and leisure, while enjoying its winter climate, can here find a field to invest his surplus capital. The partial invalid, in the light cultivation of many of its profitable products, may count upon handsome returns for his toil in its hospitable climate and genial soil. The confirmed, if not entirely disabled invalid and the aged may successfully seek its mild climate and healthy atmosphere, to escape wintry blasts, snow, ice and mud, to enjoy life, to cure disease, and to prolong life. The versatility of its production unites the sweet fecundity of the tropics to the exhilarating life of a temperate zone. The fisherman and the hunter can enjoy in the highest degree their pleasing and invigorating relaxations. Fixed between the extremes of heat and cold, with all the substantial advantages of a sea-island, without its inaccessibility, isolation and exposure, midway between the Gulf of Mexico and the Atlantic Ocean, enjoying the genial breeze from both, and occupying a delightful medium where neither excessive warmth nor frigidity come, when in its full development, where can a more charming and heaven-blest spot be found, and where combined so many favorable conditions for the restoration of the invalid, as in this brightest and fullest illustration of the "Sunny South."

Salicylic Acid. By L. B. ANDERSON, M. D., Hewletts, Va.

No disease, with which I have had to contend, has given me, in former years, so much trouble and vexation of spirit, so little satisfaction and so much annoying disappointment, as rheumatism. It is needless to recapitulate the various modes of treatment to which my patients were subjected; how seveveral, apparently similarly affected, were all treated in the same way, some successfully, and some, most mortifyingly, unsuccessfully. It is indeed, the only disease which I attempted to treat empirically, because I could never reduce its pathological, developments to any scientific and satisfactory basis.

When I became acquainted with salicylic acid, I used it first, in my own person, in a case of violent constitutional disorder resulting from the use of tainted meat. It seemed rapidly to pervade my whole system and search out and neutralize the insidious poison.

I soon after tried it on an old lady who had been bed-ridden for eight years, and who was the most ceaseless sufferer I ever saw. Her joints were greatly swollen and distorted; the lower extremities retro-flexed, and permanently fixed; and the fingers flexed and crossed. She had been subjected to every kind of treatment recommended by any reliable authority, and had taken all of the most notorious nostrums, without either relief or amelioration of her sufferings. In two weeks after beginning the use of the salicylic acid, she could rest comfortably for several hours without change of position, and there was a marked improvement in her general health. One year after she commenced using it, she could sit up in a chair, and now, she can do a good deal of useful work; roll herself in a chair from room to room, and sleep quietly all night.

I wish, specially, to call attention to the manner in which I use it, as it is so different from the recommendations in the books, and the general practice of my medical brethren, viz., I take salicylic acid ʒ ss; bicarb. soda ʒ ss; aqua pura Oj. M. Of this, I give a tablespoonful as follows: In an acute case, I administer it every hour, for four or five hours, and then only three times a day.

I saw a young lady just seized with an excruciating pain in the head from translated rheumatism. It was so violent as to produce the symptoms of concussion. She did not dare to move, and gazed with fixed eyes into space, as though she was utterly unconscious. I gave her a dose of the acid as above prepared, and in fifteen minutes another. In half an hour, she was entirely easy. This is a typical case. Such results from such doses, I have frequently seen, and often felt in my own case.

In large doses it often offends the stomach; in small, never, unless the liver is inactive, when it is immediately tolerated, after the action of a cholagogue cathartic.

I perfer it to all the acids and alkalies, all the alteratives and anodynes, all the gums and wines, all the balsams and terebenthinates that I ever used.

I hope others will give their experience, for after all this is what is most valuable; *ex principiis nascitur probabilitas; ex factis vero veritas.*

ECLECTIC DEPARTMENT.

"Carpere et colligere."

Iuaugural Address on the Catgut Ligature. Delivered before the Clinical Society of London, January 28th, 1881. By JOSEPH LISTER, F.R.S., President of the Society.

GENTLEMEN: In thanking you for the great honor which you have conferred upon me by my election to this chair, I do so with a peculiar feeling of gratitude, because I am well aware that my personal share in the proceedings of the society has not been such as to entitle me to hope for such a distinction at your hands. I can only strive to discharge to the best of my ability the important duties which your kindness has imposed. In considering the choice of a subject for the inaugural address which is expected from your President, I have felt precluded from presenting a summary of the labors of the society in the past, or from tendering advice as to its conduct in the future, and after consultation with some influential members of the council, I have decided to bring before you this evening a special subject which will, I trust, be thought not unworthy of the occasion, inasmuch as, while it is still in an unsettled or transitional state, it is full of interest for every practical surgeon, and at the same time in some of its aspects well deserves the attention of the pathologist and the physician—I refer to the catgut ligature. In adopting this course I feel it needful to crave your indulgence; for the subject is a large one, and in order to do it anything like justice I shall have to trespass for a considerable time on your attention.

The catgut ligature has in some respects exceeded my original hopes. I feared that its advantages would be limited to wounds in which putrefaction was avoided, and that if septic suppuration took place in a wound in which it was employed for securing the vessels, the ligatures would sooner or later come away like little sloughs. Such, however, has not proved to be the case. Whatever be the progress of the wound, we never see anything of the catgut, so that even surgeons who have not adopted strict antiseptic treatment have been led to employ the new material in ordinary wounds. Under other circumstances, however, the catgut has often led to disappointment. We hear of cases in which the Cæsarean section has been performed, and all has gone on well until the knots of the catgut with which the uterine wound was secured have given way, and the patient's death has been the result. Again, in ligature of large arterial trunks in their continuity several surgeons have met with bitter disappointment, the case ending in disaster from secondary hæmorrhage, or the treatment proving abortive through the channel of the vessel becoming opened up again at the site of ligature. Hence many surgeons have been indnced to return to silk, even though using strict antiseptic treatment; rendering the silk aseptic by steeping it in a suitable lotion, and cutting the ends short. This practice has, however, by no means proved uniformly successful. As an instance of unsatisfactory result I may mention a case recorded by Mr. Clutton in the last volume of our Transactions. He tied the external iliac artery under strict antiseptic precautions, and the wound healed within a week; but, as I learned from a letter which he was good enough to send me at the time, "six weeks after the operation a little blister formed, and fluid began to escape, forming a small scab, and in three months the loop which had been placed around the artery came away." Such a result was not all surprising to me, seeing that what induced me to try the animal ligature was the discovery of a small abscess about the remains of a partially absorbed silk thread, which I had applied in the same manner of Mr. Clutton, and, as it happened, to the same artery.* It can hardly be doubted that suppuration proceeding from the immediate seat of the ligature must be a source of danger. As an illustration of the mischief which a ligature of ordinary material may do, I may mention a case of goitre in a young woman on whom I operated on January 28th of last year. It was of moderate dimensions, but the effect on the respiration was so considerable, that I determined to remove it, following Dr. Patrick Heron Watson's plan of preliminary deligation of the thyroid vessels circumferentially to the tumour. If this is effectually done, the operation is bloodless—so that as the laryngoscope applied by Dr. Felix Sémon, who had recommended the case to my care showed that the anterior wall of the trachea was pressed back considerably by the growth, I adopted a measure which I believe would in all cases, of the removal of the thyroid prove advantageous—namely, I divided the tumour in the first instance in the middle line, so as in the event of adhesion to the trachea to be able to remove the two halves of the growth at leisure, dissecting it off from the trachea more or less completely as might be desired, leaving some portions at the adherent parts, so as to avoid the deadly risk of perforation of the air-passage. But in order that the circumferential ligature of the thyroid vessels may be secure, it is essential that the material should be very strong, so that the tissues ronnd about the tumour, including the vessels, may be thoroughly tightened up. I possessed no catgut which I felt was strong enough to bear the full strength of my hands, and therefore I was compelled to use a hempen ligature, after, of course, carefully rendering it aseptic by means of the carbolic lotion. Six of these hempen ligatures were used, three on each side. During the first eight days everything went on in a typical fashion according to the antiseptic method. There was a merely serous effusion rapidly diminishing, and we looked to the wound being healed in a few days more. But on the ninth day there was seen to be a little something of purulence mingled with the discharge; and the pus afterwards became thicker, though always in small quantity; a little could be pressed out from each side, and in a month one of the hempen ligatures made its escape. Five days later four others of the hempen threads came away, altogether unaltered, as they may be seen on one of the cards on the table where I have exhibited them. I submitted them to careful examination. They had a sour odor, and, applied to litmus paper, gave an acid reaction—that is to say, the natural alkaline condition of the blood serum had been changed to acidity by some peculiar species of fermentation. On examining them with the microscope I found the interstices of the threads of the hemp loaded with a little organism, to which I believe I happened to be the first to direct attention as to its modes of growth,* and to which I gave the name of Granuligera, occurring in groups of two, three, four, and so forth, as distinguished from the chains of ordinary bacteria, and of which one form at least has been since shown by Mr. Cheyne to occur very frequently in cases treated antiseptically without any interference with aseptic progress. I found that the interstices of the threads of the hemp were loaded with these little micrococci. It so happens I have had the opportunity within the last few days of obtaining a sample of these micrococci, thanks to Mr. Cheyne's kindness. He brought this flask of a pure and perfectly transparent infusion of meat to a case which I had operated on a fortnight before by excision of the ankle. The skin had been unbroken, so that I was able to operate antiseptically, and the case pursued a perfectly typical course. The wounds, which were left gaping at the time of the operation, were filled with blood-clot, which remained unaltered in appearance, though undoubtedly organized by that time, more or less. A little piece of the blood-clot from one of these wounds was introduced with careful antiseptic precautions into the flask of clear fluid, and you see it is now turbid; and there is under the microscope on the table a specimen of the little organism to which the turbidity is due. But though, under ordinary circumstances, these micrococci may be present, as Mr. Cheyne has abundantly shown, and as the excision of the ankle I have just referred to illustrates, without causing any evil, yet there may be circumstances in which they may prove mischievous, and the case of goitre which I have been relating appears to have been one of these. The micrococci developing for a protracted period in the interstices of the hempen ligature produced an acid fermentation of the serum in its most aggravated form. The acid serum became a cause of irritation, and thus the ligatures, which otherwise, being unirritating in their own substance, might have become encapsuled, and in due time absorbed, became causes of suppuration. One of the six ligatures still remained unaccounted for. In due time we sent the patient home with a small sinus remaining, a little pus always discharging from it, but it was not until the middle of September that the last ligature came away altogether unaltered. Now, gentlemen, there is no doubt whatever that if I had had catgut which I could have trusted for the operation, the catgut literatures would have been disposed of within two or three weeks, and the healing, instead of requiring eight months, would probably have been completed in a fortnight. Here, then, we have an illustration of the great disadvantage which may arise even under antiseptic treatment from the use of the ordinary forms of ligature.

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* See Observations on Ligature of Arteries on the Antiseptic System, *The Lancet*, April 3d, 1869.

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*See Transactions of the Royal Society of Edinburgh, vol. xxvii., 1875.

Animal ligatures of another kind have been provided by Mr. Barwell in order to remove these difficulties—namely, strips of the mingled yellow, elastic and unstriped muscular tissues which constitute the arterial wall, obtained by spirally cutting the aorta of one of the larger animals. But though fully admitting the efficacy of these ligatures in his hands, I am given to understand that their form and size render them by no means very convenient, and, independently of this, I cannot but feel that it is unsatisfactory, if it can be avoided, to have a special material for this particular object, and that it would be better if possible to have the catgut in a thoroughly reliable condition. Catgut, of which I have samples here, is to be had all over the world in abundance. It is beautifully strong and smooth; it is prepared of various sizes, admirably adapted for all the purposes of the surgeon, and is extremely cheap. Wholesale it is sold at 12s. per gross, that is to say, 1*d.* per hank. But as it comes from the maker it is entirely unfit for the purpose of the surgeon. However beautiful it is in the dry state, it becomes soft and pulpy soon after it has been placed in blood serum. In one of these glasses is a piece of unprepared catgut which was placed in warm serum this morning, from the blood of a cow, and within half an hour it was in the condition in which it is at the present time, swollen, soft, and pulpy. A knot tied upon it would hold as little or scarcely better than would one on a piece of the intestine from which the catgut is derived; an utterly unsatisfactory material, soft and slippery, the knot not holding in the least. It is essential in order to fit the catgut for the purposes of the surgeon that it be altered in its physical constitution so as to be no longer liable to this softening effect by the serum of the blood. It is a remarkable circumstance that the blood serum softens catgut more than even water does. It might have been expected *a priori* that a solution of a colloidal substance like albumen would have been much less disposed than water to permeate and soften an animal tissue like catgut; but it is otherwise, and therefore we cannot test the trustworthiness of catgut by steeping it in warm water, as I formerly used to do. In order to be sure that a given specimen of catgut will answer the purpose in so far as the knot is concerned, that it shall not slip, it is needful that we steep the catgut in blood serum, a somewhat troublesome process, as it involves sending to a slaughter-house for blood.

The method of preparing catgut which I published long ago answers the purpose very well even for the ligature of arteries in their continuity, provided certain conditions in its preparation be complied with. Such at least is my own experience. This, indeed, has not been very extensive, but it has been sufficient to deserve consideration. I have tied altogether nine large arteries in their continuity with prepared catgut. Of these one was a case of ligature of the carotid in a young woman aged twenty-two, with a pulsating tumour below the angle of the jaw, in the situation of a carotid aneurism and with all the symptoms of that disease. The application of the ligature reduced somewhat the pulsation, and the dimensions of the swelling, but the further cure which we hoped for did not take place. She left the hospital with a pulsating tumour, and I heard only yesterday from the medical man under whose care she is in Scotland that this tumour, for which I tied the carotid artery in 1874, still exists as a pulsating swelling, if anything rather on the increase. But though as regards the cure of the disease the ligature was unsatisfactory, nothing could be more beautiful in its effect as respects the healing of the wound without suppuration, and permanent obstruction of the artery at the seat of ligature.

A case of traumatic arterio-venous aneurism of the temporal artery may be mentioned in the category, partly because the greatly dilated condition which the naturally small artery had assumed brought it up towards the dimensions of a large trunk, and partly because the concurrent ligature of the largely dilated veins would, without antiseptic means, have been justly regarded as of considerable danger. The others were all cases of ligature of the femoral. Six were popliteal aneurisms, four of which presented nothing deserving of special remark. One was a diffuse aneurism extending up to the junction of the lower and middle thirds of the thigh. One was an enormous diffuse aneurism reaching up nearly to Poupart's ligament. It was necessary for me to tie the femoral artery about the situation of the ordinary origin of the profunda, and even there my incision opened into the aneurismal clots. The last was a case of a large arterio-venous aneurism of the upper part of the femoral, of idiopathic origin. This case was of such special interest that I hope on a future occasion to make it subject of a paper before this society. In all these cases, except two, catgut prepared by the old method was employed, and in all these nine cases the result was satisfactory, and recovery perfect, except as regards the poor young woman who has still the pulsating tumor in her neck.

As regards the mode of applying the ligature, I have always used a single reef knot, with short-cut ends, tying it sufficiently tightly to cause the giving way of the internal and middle coats. This latter point is not, indeed, essential; as I long ago surmised, and as Mr. Barwell's experience has demonstrated. But if, as in the case of catgut, the form of the ligature admits of it, injury done to the deeper tunics is, I believe, advantageous, by leading to a salutary corroborative process of repair.

Why, it may naturally be asked, has my own experience been more satisfactory with the catgut ligature than that of many other surgeons? There are, I believe, two reasons for this: one is, that I have never ventured to tie an artery of considerable size in its continuity without having taken pains to ascertain that the catgut was of thorougly trustworthy material; and the other reason is, that I have adopted strict antiseptic means of treatment, not only during the earlier stages of the case, but to the last. So long as any part of the wound remains unhealed, antiseptic treatment of the strictest kind ought, I believe, to be employed. Even though the sore may seem to be superficial, there may still exist a sinus leading down to the site of the ligature, and if ordinary treatment, as distinguished from antiseptic, be employed, down this sinus the septic process may advance and invade the ligature, and, inducing unhealthy suppuration and ulceration, may lead at last to disaster from hæmorrhage. I know that this has actually taken place.

But although the catgut prepared after the old method answers very well if it be of proper quality, there is this great objection to this method that it requires a long time in order to produce the requisite quality. At least two months are needed to make the ligature at all trustworthy. It is better at the end of six months, and still better at the end of a year. I possess catgut prepared in this way twelve years old. I have brought here a sample of such catgut which has been steeping in warm blood serum since this morning, and it will be seen that it remains translucent and is comparatively firm, instead of being opaque and soft like the unprepared catgut in the same serum.

Now, the length of time that the present method requires is a very serious objection. It makes the surgeon who has not prepared the catgut for himself, and kept it for a long time, at the mercy of the person who supplies it; and the person who supplies it not being aware of the enormous importance of the question of time, if he happens to have run out of that which has been long prepared, will sell what has been only a short time in the preparing liquid, and is in consequence altogether untrustworthy. A case illustrating this point occurred last year in my practice at King's College Hospital. A patient was admitted who had met with a severe wound on the ulnar side of the forearm, at the anterior aspect. The ulnar artery had been divided. This had been secured by my house-surgeon. He had also tied with catgut the corresponding ends of the various tendons that had been severed. But when I saw the patient next day I found that he could not feel with his little finger and the adjacent side of the ring finger, and therefore it was evident that his ulnar nerve also had been divided, and my house-surgeon had not thought of attending to the ulnar nerve. I therefore cut the stitches in the skin and proceeded to explore the deeper parts of the wound, in order to find the ends of the divided nerve, and tie them also together with catgut, and I found that all the catgut sutures with which the ends of the several tendons had been tied together were lying absolutely loose. The knots had slipped within the twenty-four hours, and yet this catgut had been supplied by one of our ordinary instrument-makers. He had sent us what had not been sufficiently long prepared. I took care to use proper catgut for the ulnar nerve; and the patient left the hospital with restored sensation in the fingers.

The length of time that it requires is, therefore an exceedingly serious objection to the present method of preparation ; and one great object which I have had in view to a series of experiments on this subject with a view to improving the preparation of the catgut ligature has been to devise a means, if possible, of preparation within a short time. These experiments—it may seem almost ludicrous to say so—have occupied two years of my leisure time in the past, some time ago, and after being interrupted by an accidental circumstance, have been continued in a more desultory manner since ; but at length I have felt myself justified in bringing before you a new mode of preparation by which the catgut can be prepared in a short period, and at the same time in a perfectly trustworthy condition.

But before I allude to these experiments, which I must endeavor to do in a short compass—I should weary you if I were to bring a large proportion of my facts before you, though I may say out of the hundreds of experiments I have performed on the subject I have never performed one which has not added something to my knowledge of it—before referring to these experiments I wish to say a few words as to what catgut is. Catgut, as you are doubtless all aware, is prepared from the small intestine of the sheep. The gut is treated in what seems an exceedingly rude manner for so delicate a structure. It is scraped with some blunt instrument, such as the back of a knife, over a board ; and by this means, as the people express it, the dirt is scraped out. That which these people call the dirt is the exquisite and complicated structure of the intestinal mucous membrane. But while the mucous membrane is scraped out from within there is also scraped off from without the circular coat of muscular fibres. The result comes to be that the intestine is converted into a comparatively unsubstantial material, consisting of two parts or bands, one more slender than the other. When the mesentery is stripped off by the butcher the peritoneal covering of the gut shrinks into a narrow strip ; and this, with some longitudinal fibres, constitutes the more slender of the two parts to which the intestine is reduced by this process of scraping. The other part is the essential material from which the catgut is prepared, and this is neither more nor less than the submucous cellular coat of the intestine. When I first visited a catgut manufactory I was astonished to find that after this scraping process the intestine could be blown up still as a continuous tube, as you see can be done with this specimen, which has been treated in the manner I have described. This exquisitely delicate structure is a beautiful anatomical preparation of the submucous cellular tissue, though made in so rude a fashion. This coat of the intestine which, in the sheep, has this extraordinary toughness, is the material out of which the catgut is prepared. For what the manufacturer calls the "ones"—the thicker form of ordinary catgut—all that is done is to twist the entire tube by means of a wheel like a rope in a rope-walk, up to a considerable degree of tightness, and then allow it to dry. It is afterwards exposed to the fumes of burning sulphur, and for some more special purposes it is bleached by the action of potash. But the essential thing is the twisting and drying ; it can be prepared without the use of sulphur, as well as without the use of potash. Some specimens which I have here are prepared by water only, without the use of any other ingredient. This exceedingly beautiful structure, as I think we must consider it, as fine as a horsehair, is prepared without any re-agent whatever; nothing but the animal tissue twisted and dried. For the finer kinds the tube of the submucous coat is split up by means of razor blades more or less numerous, according to the degree of splitting required, connected with a conical piece of wood, which is pushed along the tube.

Such, then, is the material with which we have to deal. The first of the more recent experiments which I performed with reference to it was made with the view of ascertaining, if possible, what part the water played in the ingredients used for the preparation by our old method. If I steep unprepared catgut in a mixture of dry carbolic acid and oil, however long it be so steeped, although it will be, of course, abundantly aseptic, it remains utterly unfit for the purposes of the surgeon ; a knot upon it would still slip in a wound. But if, instead of using carbolic acid in the crystallised state, we use carbolic acid which has been liquefied by the addition of a little water, we get in course of time a properly prepared catgut. I wished to ascertain how much water was required. The carbolic acid would enable oil to dissolve a certain amount of water ; would that amount of water be sufficient which carbolic acid enables oil to dissolve ? Accordingly I prepared jars of carbolic oil, some containing the full amount of water we had used hitherto, some a smaller quantity, and some none at all, and placed in them portions of the same hank of catgut. In due time I proceeded to examine the result, by taking portions of gut and putting them into warm water, and leaving them for a certain time in order to ascertain how the knots would hold. To my great surprise I found that which had been steeping in the carbolic acid and oil without any water was just as good as that which was in the carbolic acid and oil with the water. This was contrary to distinct previous experience. Reflecting on the matter, I saw that the only possible explanation was that the catgut was already, so to speak, prepared before I put it into the liquid. Now it so happened that the catgut I had used was several years old ; and it turned out that mere age of the catgut prepares it : that in proportion to its age it is rendered less liable to be softened by water or by blood serum, and a knot tied upon it will hold better. And thus I had, for the first time I belive, scientific evidence of the truth of what is popularly spoken of as the "seasoning" of various articles made of animal products. I asked a person who sold violin strings if there was any result from keeping the strings a long time. He said, No ; the only result he knew was that they would probably get rotten. But it so happened just about that time there came an old fiddler to amuse the patients at the Royal Infirmary of Edinburgh at Christmas-time. The weather was wet and he said that his fiddle would not work properly because the fiddle-strings were not properly seasoned. So that he was aware that fiddle-strings, which, of course, are catgut, are liable to seasoning, and require it. This was to me a very important fact, because it served to explain the success that I had had in my earlier experience with the catgut before I knew at all the proper mode of preparing it. I look back with horror at some of my early procedures with catgut. I have operated, for example, on an irreducible ventral hernia, opened the sac, divided the adhesions, returned the protruding intestines, stitched up the mouth of the sac with the catgut, and then applied stitches at considerable intervals in the skin. All went perfectly well; but the mode of preparation that I then used, if I had worked with catgut recently made, must have ended in utter disaster; the knots must have slipped in a few hours, and the intestines must have been protruded through the wound.

I need hardly say that this mode of preparation, interesting though it is, would not be satisfactory; it would only have, in a more aggravated form, the inconvenience of the extremely long period which our old method requires; and, besides that, it by no means provides all the conditions that must be fulfilled in order to provide a perfectly satisfactory state of the catgut for surgical purposes. These conditions I will now mention. In the first place I have spoken of a short period of preparation. This is very desirable. Then it is essential that the catgut should have proper strength, so as to bear any reasonable strain that the human hands can put upon it in the thicker forms; as when used, for instance, in such cases as the circumferential ligature of the thyroid vessels, in the removal of a goitre, or for securing the pedicle in ovariotomy. And it is not sufficient that it should be strong to start with; it is easy to get catgut strong in the dry state; it is necessary that it should be strong after steeping in blood serum for a while. Take, for example, the case of tumour of the thyroid. I passed in that case six ligatures; and in a former case where the tumour was larger I thought it prudent to pass as many as eight, so as to subdivide more the mass that had to be tied; but it is not convenient to tie each of these ligatures as soon as it is passed; and the process of passing takes a considerable time. Now it would be a very sad thing if the residence of the catgut among the tissues soaked with serum for a few minutes, or even a quarter of an hour, should render the catgut so soft that it should give way when we put the strain of the hands upon it. That, then, is another point that is essential, if the material is to be useful for all the purposes for which it is desired. Then, again, it is necessary that a knot tied upon it should hold with absolute security, not merely in the first instance, but after soaking for an unlimited time in blood serum. It is further needful that it should not be too rigid; for, as we shall see immediately, it is possible for catgut to be over-prepared, in which case it may remain almost like a piece of wire among the tissues, and ultimately, perhaps, come away by suppuration in consequence of the mechanical irritation which it produces. But while the animal juices must be able to soften it sufficiently to render it mechanically unirritating, yet, on the other hand, it will not do for it to be too rapidly disposed of by absorption. If it is to do duty for the ligature of an artery in its continuity in the immediate vicinity of some large branch, it must remain for a considerable time of good strength, unabsorbed, and when it is at length absorbed it is desirable that it should be removed in such a manner that while it is reduced in thickness it should still, as long as any of it remains, retain its tenacity.

Now these are a series of conditions which I assure you it is not easy to fulfil completely. I have in various experiments complied with some of them easily enough, but failed in others. Sometimes I have succeeded with all but one, and one has baffled me. I have used various materials in experiments, as you will naturally suppose. One substance that suggested itself was tannic acid, so as to convert the fibrous tissue of the catgut into leather. I succeeded well enough in some respects with tannic acid applied in different ways, but in one respect I did not succeed. I have not obtained by means of tannic acid a kind of catgut that is not too speedily absorbed. Even a piece of kid leather, cut into a suitable shape for sutures, and rendered aseptic, became too rapidly absorbed. Chromic acid was another agent which I very naturally tried on account of its well known effect in hardening tissues. Chromic acid alone does not work very well, but I found that the addition of some other substance to it aided its action very greatly. By adding, for instance, to the watery solution a little glycerine, which produces a reducing action on the chromic acid, we get a different sort of liquid, which acts much more energetically on the catgut. I was highly delighted with the results of the action of this mixture of chromic acid and glycerine ; and just about this time it happened that Mr. Oliver Pemberton of Birmingham applied to me for a piece of catgut for the purpose of ligaturing the external iliac artery in a remarkable case of three aneurisms in one limb—two in the femoral, and one in the popliteal. I thought I could not do better than send him a piece of my recently prepared chromic catgut. I did so ; and a month afterwards he wrote to me saying that nothing could be more satisfactory than the result. He had operated antiseptically ; the wound had united by first intention, and so far as the case could go well, all had gone well. There was, indeed, gangrene of the lower part of the leg, which Mr. Pemberton had predicted would occur in consequence of the existence of four successive obstructions in the course of the arterial channel—viz.: the ligature and three solid aneurisms ; but the case, under proper management, was doing well. Four weeks later, however, Mr. Pemberton wrote to me again, telling me that soon after his last report the patient had begun to show signs of suppuration about the seat of the wound. After a while the abscess opened in the cicatrix, and one day the ligature which he had placed on the artery was found lying unaltered on the granulations.* It is now on one of the cards before you—an over-prepared ligature, which had come away, rigid and wire-like, making its way out, as a piece of glass might have done by mechanical irritation. This opened my eyes for the first time to the possibility of having catgut over-prepared. This over-preparation by means of chromic acid is, I understand, to be found illustrated in a large German school at the present time. I have been told by an American physician, who has lately been in London after spending some time at that school, that the catgut ligatures come away from all wounds to which they are applied in that clinique. They count the ligatures as they put them on, and invariably see them all before the case is done with. The catgut has been over-prepared.

It is by means of chromic acid, however, that I have at length arrived at a result which appears to satisfy all our conditions. But before speaking of the new method I wish to say a few words more with regard to the old. To what is it that it owes its virtue ? In this bottle is some catgut which has been nearly ten months in our old preparing liquid—namely, one part of carbolic acid which has been liquefied by means of water to five parts of olive oil. In this other vessel, again, we have catgut which has been the same length of

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*For an account of this case by Mr. Pemberton see *The Lancet*, August 4th, 1877.

time in a solution of carbolic acid in water. Water will only take up one-twentieth part of its weight of carbolic acid; but the effect produced upon the catgut by the watery solution is very much greater than that brought about by the four times stronger oily solution. In the former case, as you can see, the catgut is almost black—a sort of purple black—while the other is comparatively pale, very little altered from its original color. This circumstance shows two things. In the first place, the effect of the watery solution of carbolic acid upon the catgut explains the efficacy of the water in our old method. It is the watery solution of carbolic acid in the liquid of the old method that is the effective agent. But while that is the case, when the watery solution is mixed with oil, the fact that it is so mixed limits and checks its operation. If catgut is kept in the watery solution only, there seems to be no limit to the degree of continuous preparation of the gut, so that it becomes more and more dark in color, and more and more difficult of absorption by the tissues. It is otherwise when the watery solution is blended with the oil. Though the process does go on for many months, there comes a time when it comes to a standstill. You need not fear that catgut prepared by the old plan is ever over-prepared. There is a specimen on the table which at the end of twelve years is as limp, after steeping in blood serum, as it would have been at the end of a single year. Therefore, we possess in the carbolic oil a means of checking any mode of preparation that we may adopt keeping it from that time forward not materially further prepared, while at the same time the large proportion of the carbolic acid to the oil (one to five) ensures the catgut being maintained perfectly aseptic.

The method of preparation which I have now the honor to bring before you is the following: I dissolve one part of chromic acid in 4000 parts of distilled water, and add to the solution 200 parts of pure carbolic acid, or absolute phenol. In other words, I use a one-to-twenty watery solution of carbolic acid, only that the carbolic acid is dissolved not in pure water, but in an exceedingly dilute solution of chromic acid. But minute as is the quantity of the chromic acid, it exerts, when in conjunction with carbolic acid, a most powerful effect upon the gut. The first effect of the addition of the carbolic acid to the chromic solution is to change its pale yellow color to a rich golden tint. But if the liquid is allowed to stand without the introduction of the catgut, it changes in the course of a few hours to a dingy reddish brown, in consequence of some mutual reaction of the two acids, and a considerable amount of grey precipitate is formed. If, however, catgut about equal in weight to the carbolic acid is added as soon as the ingredients are mixed, the liquid retains its brightness, and the only change observed is a gradual diminution of the depth of the yellow color; the precipitate, which I presume still occurs, taking place into the substance of the catgut. As soon, therefore, as the preparing liquid has been made, catgut equal in weight to the phenol is introdued into it. If you have too large a proportion of catgut, it will not be sufficiently prepared; if you have too small a quantity, it may run the risk of being over-prepared. At the end of forty-eight hours catgut steeped in such a solution is sufficiently prepared. It is then taken out of the solution, and dried, and when dry is placed in one-to-five carbolic oil; it is then fit for use. I have here a sample of catgut prepared by this method. Although it has been steeped in warm blood serum since this morning at 11 o'clock it is still translucent and firm, without being rigid, and a reef knot tied upon it holds with the most perfect security.

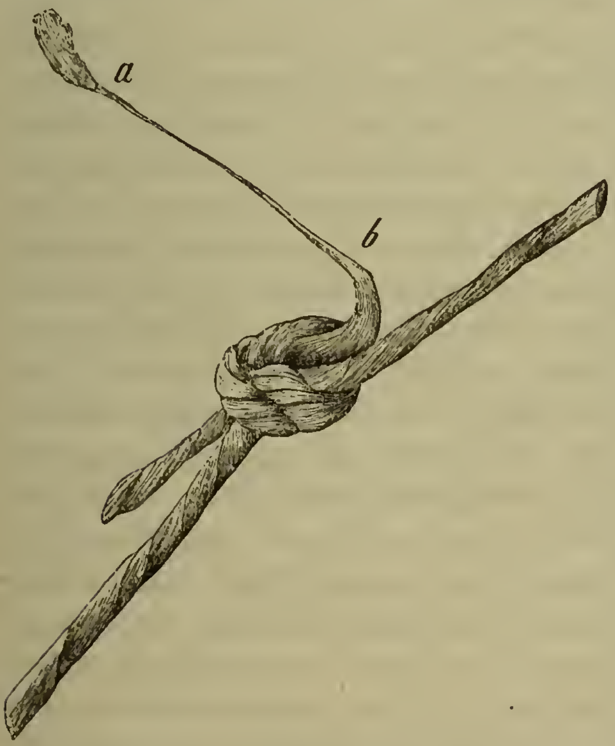
The strength of the catgut depends upon different circumstances. In the first place, sheep differ as to the strength of their intestines, and the catgut-maker, if he understands his business, will insist upon having his raw material of the proper kind. In the next place, the intestines must not be allowed to putrefy ; they must be taken fresh. For these things you must, of course, rely upon the maker of the catgut. In the next place, the liquid causes a certain amount of softening of the catgut, and if it is introduced in loose hanks, this will tend to produce a little uncoiling of the twisted cord, and a still greater degree of uncoiling will take place during drying. It is of very great importance that this should not occur, because it involves weakening of the thread, and that in different degrees in different parts, and this may lead to the gut giving way when you subject it to a strain. The catgut, then, should be prepared on the stretch, both when it is put to soak and when it is put to dry.

I need not enter into the mode in which this can be done by the manufacturer. I may only say this, that the surgeon who wishes to prepare it himself may do it in different ways. For instance, he may take two large test-tubes, one a little larger than the other, and he may wind the catgut on the smaller tube, fixing one end by sealing-wax, winding it round, and then bringing it up again, and fixing the other end with sealing-wax at a higher level than the liquid will come to, putting sufficient liquid into the larger test-tube, and introducing the smaller test-tube with the catgut wound round it, with a little shot to keep it down in the liquid. After forty-eight hours he takes out the smaller test-tube and leaves it till the catgut is completely dry. I merely mention this as an illustration, and also as furnishing a hint to some surgeons in private practice who may desire to prepare the catgut themselves. Or a couple of gallipots, one larger than the other, will do just as well. But, as I have already said, the principal uncoiling takes place during drying, and for all ordinary purposes a sufficiently good article is got by putting the catgut loose into the liquid, and putting it to dry on the stretch, by tying the ends of each hank to two fixed points in a room.

In the dry state, catgut prepared by this method is as strong as need be. As to strength in the condition after steeping in blood serum, I confess it is only this very day that I have obtained evidence that catgut thus prepared is really all that we can desire in that respect. The catgut of the hank from which this specimen was taken measured in the dry state 2⅔ hundredths of an inch in diameter, and broke at 13 lb. 6 oz. I have found by experiment that 10 lb. is the utmost strain that my arms are able to put upon a cord. 13 lb. 6 oz., then, is amply sufficient; while, at the same time, the catgut is not at all too large for going into the eye of an aneurism needle. Having obtained the other day some fresh blood of a cow from the slaughter-house, I took some of the serum to-day and put two pieces of this same hank of catgut in the serum, and I placed it in a stoppered bottle in a warm box, at a temperature of 98° F. After more than half an hour I tested the breaking strain (I must not stop to explain how that is done), and I found that the breaking strain of the same catgut, which in the dry state had broken at 13 lb. 6 oz., was 11 lb. 4 oz.; that is, though suppled by the serum, it had only lost in strength 2 lb. out of 13 lb. I think that is really all that can be desired.

The only remaining condition to be considered regarding the new catgut is its suitable behaviour among the tissues. Before describing this I wish to say a few words regarding the manner in which catgut is absorbed. It has been said of late by various persons that the catgut is dissolved by the serum. I must confess that this is entirely contrary to my own experience. I have already said that in order to test the quality of catgut you must have it steeped in blood serum. I have tested in this manner catgut prepared in various ways. The serum has sometimes been putrid; sometimes it had no smell at all, and sometimes it had a little odour. The serum has been kept about the temperature of the body, but I have never seen the slightest indication of any chemical solution of the catgut. Then, again, as to the behaviour of the catgut in the body. Suppose we use it as a stitch, if the catgut were disposed of as a matter of chemical solution, we should expect that when it is employed as a suture, and a piece of our protective is put over it, which is always kept moist with serum perpetually oozing from the wound, the outer parts of the stitch, the parts outside the skin, as well as the parts among the tissues, would show signs of diminution. It is never so. The diminution is always absolutely limited to the parts within the tissues. It is still more striking, as was suggested to me by Mr. Cheyne, to consider the case of catgut used as a drain. There its very function is to drain out the serum, and it is perpetually washed with it. You might suppose that a stitch might perhaps get a little dry. Here there can be no mistake, the serum from the wound is perpetually flowing over the gut, yet, as in the other case, we find the diminution of the catgut is absolutely limited to the part within the tissues. This seems to me sufficient evidence that it is not a question of the mere chemical solution of the catgut, but of the disposal of the catgut in some way or other by the living textures.

Now, if we examine catgut in the process of diminution we find that it may be affected in one of two ways. If it has not been properly prepared, the substance of the catgut becomes converted in the course of a very few days into a soft pultaceous mass, which, when we examine it by a microscope, we see consists of the remains of the old cellular tissue of the submucous coat, with the interstices among these fibres filled with cells of new formation. The catgut tissue is inflated with young growing cells, and it is obvious it is this infiltration which is the cause of the softening. But, on the other hand, if the catgut is properly prepared, instead of being infiltrated by the cells of new formation, it is only superficially eroded. I have here a pretty example of catgut prepared by the new method which has been served in that way by the tissues. You will see that at the part which was among the tissues there remains a very slender residue of the catgut, all the rest having gone; but that slender residue continued firm and translucent, still retaining its firmness, showing not even a superficial infiltration—in short, having exactly the characters that we desire for catgut required for the ligature of an artery in its continuity—viz., that till the last, even though reduced in dimensions, it shall retain its firmness and its tenacity. We know that antiseptic treatment has shown that a piece of dead bone may be absorbed provided it be not putrid; the granulations that overlap it superficially may, so to speak, erode it. It is not necessary for us now to consider how that is effected, but certainly in some way or other the granulations do what mere steeping in serum, whether putrid or non-putrid, never would do. Never, I believe, would the bone be dissolved by the serum. And just as a non-putrid sequestrum is served by the tissues, so is a well-prepared specimen of catgut—it is superficially eroded. I have here a stitch that I removed to-day from a wound made ten days ago—a wound made for stretching the anterior crural nerve, which was stretched as well as the sciatic in an aggravated case of sciatica—and you may see that as yet it shows no signs of erosion. We know by experience that if it were left three or four more days we should find it probably eroded, as the former specimen shows; but until nearly a fortnight has elapsed erosion does not begin. It proceeds gradually, and the thicker the catgut the slower does it proceed. We may fairly consider that from a fortnight to three weeks is long enough for the persistence of a ligature upon an artery in its continuity. [Three days later I removed two remaining stitches in the case last referred to, and found both of them slightly eroded superficially.]



In this woodcut the suture referred to is represented magnified five diameters. Its actual thickness was 1-50th of an inch. That part between *a* and *b* is that which had been among the tissues.

I have brought with me the carotid artery of the calf in which I first established the fact of the substitution of new living tissue for the dead old tissue of the catgut. If any gentleman will examine the specimen after the meeting he will see the ligatures of new formation incorporated with the external cellular coat of the artery. I have been strangely misunderstood as having intended to convey the idea that the catgut when it becomes organised, comes to life again. Gentlemen, such an absurd notion certainly never entered into my head, any more than, when I have spoken of the organisation of a blood-clot, I have meant by that expression to convey the idea that the blood-clot becomes organised by its own inherent virtue. I found the term "organisation" ready to my hand; it was no term of my invention. It was used with reference to lymph. Now, pathologists in speaking of lymph as becoming organised, did not, I suspect, mean by the expression to imply that it was the lymph substance that had the power of self-organisation as distinguished from any influence that surrounding tissues might exert upon it. So in the same way the expression "vascularisation of lymph" was used when it was universally believed by pathologists that the blood-vessels were formed only by loops from pre-existing blood-vessels. Nowadays, a different view may be taken, but the term "vascularisation of lymph" was employed without any notion that the lymph itself created the blood-vessels. And so when I spoke of the organisation of the blood-clot, or of catgut, I never meant to convey the idea that either the one or the other did the work itself. As to the blood-clot, we know that if it remains free from putrefaction among the tissues, it speedily becomes infiltrated with cells of new formation. Whether the white corpuscles originally present in the clot take any part in the formation of these new cells is a question now under discussion, and one, I conceive, not at all prejudiced by the use of the term "organisation of the blood-clot." With regard to catgut, I think if gentlemen would refer to my original paper in *The Lancet* they would see that I stated very explicitly that new tissue forms at the expense of the old, that the old tissue is absorbed by the new, and that, as the old is absorbed, new is put down in its place.

In conclusion, gentlemen, I venture to recommend the new chromic gut as in all respects deserving of your confidence; and at the same time to thank you sincerely for the patient attention with which you have listened to this long address.—*The Lancet.*

National Health Assoeiation. Report of the Committee on the Prevention of Venereal Diseases.

Syphilis lurks in the most exemplary household, defiles the parents and blights the offspring, its very name being unknown to them. Until the public are taught that mere personal rectitude is no safeguard, it is idle to expect that any system will be cordially indorsed. So long as venereal disease is popularly believed to be only the fruit of illicit sexual intercourse, its very consideration will be shunned. The public must, therefore, be enlightened, and your committee beg to remind this Association that this task is eminently its duty, as to the existence in their midst of a disease which is fraught with as much if not more evil to humanity than all other ills of the body combined. The other great scourges of mankind are occasional like cholera, or limited by climatic bounds like yellow fever, or outwardly hideous and terrifying like small-pox; but syphilis spreads its venom invisibly, insidiously, daily, throughout all seasons, in every land, among all races and conditions of people.

Certain individuals—few of them physicians—have disputed the statement that syphilis is either very common, or so dangerous that it is beyond speedy and permanent cure. In the absence of exact numerical statistics, your committee believe it will be sufficient to refer to the experience of those medical practitioners who have had opportunities of judging, confident that they will, without exception, declare with Parent Duchatelet that "of all contageous diseases to which the human species is liable, and which causes the greatest evils to society, there are none more serious, more dangerous, or so much to be dreaded as syphilis; its ravages far surpassing those of all the plagues which at different times have terrified society."

With Prof. Gross and Dr. Marion Sims, that "a greater scourge than yellow fever and cholera and small-pox combined is quietly installed in our midst, sapping the foundations of society, poisoning the sources of life, rendering existence miserable and deteriorating the whole human family."

With Sir Thomas Watson, that "it counts its victims not only in the ranks of the vicious and self-indulgent, but among virtuous women and innocent childen by hundreds and thousands."

With Sir James Paget, "it would be difficult to overstate the amount of damage that syphilis does to the population, children being born with diseases induced by it, which render them quite unfit for the work of life."

With other eminent medical men quoted by Dr. Sims, in his inaugural address as President of the American Medical Association, at Philadelphia, in 1876, Sir William Jenner, Prescott Hewitt and Mr. Simon, chief medical officer of the privy council, who have borne testimony of their experience of its ravages among pure women and innocent children.

Statements such as those do not need to be backed by numerical data of questionable value. These can often be distorted to prove any point desired, by selecting for comparison maximum and minimum years, or special returns from certain localities, as illustrated by the array of figures, by which the opponents of the British Contagious Diseases Act have sought to prove that the sanitary surveillance of public women has actually augmented the amount of venereal diseases in countries where it is exacted.

At best but a small proportion of the venereal diseases ever appears on vital returns. The true statistics of their frequency are the professional secrets of the physician whose aid is sought to relieve them, or whose eye recognizes them beneath the mask of other ailments. The most carefully-prepared reports fail to exhibit the rheumatisms, the cachexiæ, the cutaneous affections, the defects of vision, the lessons of the spinal cord, the brain, the liver, etc., which have had syphilis for their cause. Especially is this true of the transmitted syphilis. Only a few days ago a distinguished American ophthalmologist declared to one of your committee, that the majority of his infant patients were characterized by the oldish features and notched incisors and badly shaped head which mark the syphilitic child, and he boldly asserted that interstitial keratitis is always a consequence of constitutional contamination. The greater proportion of venereal cases stalk about the streets in affected health and never appear on any returns. How many others find expression in suicide, in insanity, in conjugal infidelity and actions for divorce!

As far as figures can be evidence, the statistics carefully collated by Dr. Frederic R. Sturgis, of New York, are worthy of consideration. A summary of the poor treated in 1873, at the various hospitals and dispensaries of the city of New York, enabled him to estimate the total number of venereal and syphilitic poor patients, but this did not include those treated at their homes, often by themselves, at physicians' offices, by apothecaries and by quacks. Notwithstanding these omissions, of 280,536 poor persons receiving aid at public institutions, 12,341 suffered from venereal diseases, 5,045 of these being syphilis; that is, 44 in every 1,000 were venereal cases, 18 per 1,000 syphilitic.

In Mr. Wagstaff's report of the amount and kind of venereal disease under treatment at certain charitable institutions in London, in the year 1868, it is stated that sixty-nine in every thousand patients were venereal, thirty-five of these being syphilitic; and he estimates that among the million and a half of the poor population of the metropolis who receive medical relief for disease at hospitals, dispensaries and at the hands of parochial medical affairs, about one in fourteen is affected with venereal disease of some kind, this not including midwifery cases nor the classes excluded in Dr. Sturgis's report.

During the same year 9,796 venereal patients were treated at the hospitals in Paris, and M. Lecour, Préfet of Police, estimating these as one-fifth of the total number of venereal patients treated at their homes by physicians, and who seek relief at the hands of apothecaries and charlatans, gives a sum total of 48,980 cases, about one in forty of the entire population. "A formidable array, and one probably much below the real amount."

The same estimate of the proportion of private to public cases of five to one, arrived at by Dr. Sturgis from wholly different date, would give for New York, out of a much smaller population, 61,705 venereal patients in the year 1873—nearly one in every fifteen of its men, women, and children—a number only dwarfed by comparison with London, where one hundred thousand poor alone are annually affected with syphilis.

Military and naval reports, while not free from the same objections of defective registration and classification, are, however, very much more exact, especially in the matter of enthetic diseases, there being less reluctance to apply for treatment, and less dread of exposure on the part of the patient in a community composed wholly of men, and no alternative but to consult the medical officer, who is required to include them in his returns.

The last year of the Marine Hospital reports includes patients treated at the dispensaries and surgeons' offices outside of hospitals. Neither these nor the naval and military returns include the large number of cases not registered, and treated surreptitiously by apothecaries, nurses and hospital stewards. Officers generally avoid the necessary exposure, and their cases, consequently, seldom appear on the returns. Enough has been shown to establish this fact, that at least one man in every thirteen in the naval service of the United States—last year one in ten; one in every nine in the army—of the negro troops one in six; one in every seven in the British army; and one in every four of the merchant sailors presenting themselves for treatment at marine hospitals and dispensaries, is affected with some form of venereal disease.

Your committee are able by the courtesy of the surgeon-general of the navy to supplement these alarming figures by the significant fact that of the boys who were applicants for enlistment as apprentices in the United States navy during the year 1879, twenty per thousand—one in every fifty—lads under seventeen years of age were rejected on account of venereal diseases, twelve of these being syphilitics. Furthermore, of the young men examined at a certain institution which they had left two years before in good health, not one in five escaped venereal disease of some sort. There is no reason to believe that the proportion among other young men is less appalling. The family physician and the specialist for private diseases, advertised without disguise in the family newspaper, will never tell the tale of the tens of thousands who seek relief at their hands.

But, even were it possible to obtain accurate information of the number of cases of venereal disease contracted in coitu, it would give no indication of the actual injury to the human race by these diseases. It would take no account of the myriads of the happily still-born, and of the feeble offspring who bring their taint into the world with them, after having diseased their mothers during their uterine existence;

nor of those other myriads, contaminated by mere contact with the infected who mingle in every crowd. Every one instinctively shrinks from the touch of the sufferer with small-pox; but how few realize that the syphilitic is a leper also to be shunned? how few mothers are aware of the danger to themselves and children from nurses and house-maids drawn from a population in which every fifteenth person is diseased? how few parents suspect the peril to their daughter from her accepted lover's kiss who may be that one in every five young men among the better classes who has a venereal disease, which there is one chance in two is syphiltic?

These are not speculations. Gross has seen many cases communicated by kissing, and he tells of fifteen women, nine children and ten men diseased by a midwife, who had a chancre on her finger, contracted in the exercise of her profession, and who had thus carried the disease from house to house.

Marion Sims says: "I have seen a cook and chambermaid with syphilitic ulcers on the fingers, and nurses infected by the children who had been born of syphilitic parents, in turn infecting sucking babes born of healthy parents, and I have known a drunken vagabond husband to contract syphilis in a low brothel and communicate it to his wife, who unwittingly gave it to her four children simply by using the same towel and wash-bowl;" and one of your committee can add the case of an estimable and venerable lady who lost her eye-sight this very year from using a towel in her son's room, carelessly left by him upon the rack, and another of the wife of a clergyman, who, this summer, sought relief at a Virginia spring for a horrible affection contracted in domestic contact with her servant.

Dr. Wales, the present surgeon-general of the navy, saw a number of cases of chancre of the lips among the smokers of one set of cheroots, of which the wrappers had been moistened by the saliva of a Minila cigar-girl; and at Beyrout he learned that it was not unusual for syphilis to be contracted by using an arghileh that had been pressed by the lips of a diseased smoker. Who would venture to eat the fig from Smyrna if he had seen the top layer of the choicest box pressed flat by the saliva-wetted thumb of a packer, who, there was one chance in ten, was a syphilitic?

A member of your committee astounded an otherwise well-informed gentleman by explaining the risk he ran after he had been capsized in a river, in accepting the proffer of a flannel undershirt from a young man whose body was accidentally discovered to be spotted with a suspicious eruption.

A lady was equally alarmed when told by her husband, a physician, that she had invited to her table a young man, who, in the course of a physical examination that morning, had been found to have his mouth and tongue covered with mucous patches, and that her daughter was dancing in a public ball-room, with another whose body was repulsive from syphilitic eczema.

A tired invalid at a fashionable hotel had just settled himself in bed, when the odor of tobacco on the pillow prompted an inspection, which revealed sheets which had not been changed, and which, being a medical man, he quickly deserted, conscious that they might have shrouded a syphilitic predecessor.

An editorial in the *College and Clinical Record*, of Philadelphia, of October 15th, states: "It happened to the writer to be recently called to see a man of most respectable surroundings, who bore an unmistakable venereal sore upon his lip, and subsequently manifested all the features of secondary syphilis. It was said that this had followed a trifling surgical operation upon the part affected for the removal of a slight deformity, the instrument or hands of the surgeon communicating the specific virus in the same manner, it will be remembered, that a New York dentist not long ago communicated syphilis by his forceps, and a well-known laryngologist inoculated a number of patients with pharyngeal chancre."

When the public knows by how many thousand channels this disease may assail them, your committee have no doubt that they will demand protection at any cost, and they urge upon this Association the promulgation of the fact that so long as syphilitics are allowed to go unrestrained, the spotless woman and the innocent child share the danger of contamination with the libertine and prostitute.

Let it be known that this fearful pest may be communicated—

By the blankets, of the sleeping-car and the sheets, towels and napkins of the steamship, hotel or restaurant;

By the hired bathing dresses of the seaside resort, and the costumes rented for the fancy ball;

By the chipped edges of a coffee-cup, as seen at most hotels and eating-houses, and their half-cleansed knives, forks and spoons;

By the public drinking vessels in the railway car or station, as well as the public urinal or closet;

By the barber's utensils, the brush and comb in the guest-chamber, the hatter's measure or the borrowed or sample hat;

By the surgeon's or dentist's instruments, or the vaccinator's lancet;

By the broom or dust-brush handled by a parlor maid, or by the spoon touched by the mouth of the cook or nurse;

By the toys sold to children in the streets by vendors with poisoned lips or fingers;

By playing-cards and visiting cards which have been used, and especially by car-tickets and by the paper money which circulates in a city where 50,000 syphilitics are at large.

By the loaned pipe, or cane or gloves;

By the grasp of a friend's hand or the kiss of a betrothed lover; by the son to his mother and sister; the husband to his wife and unborn child, and by the latter to its mother.

Were venereal disease restricted to those who seek illicit sexual gratification, it might be well to let the guilty suffer and die; but when their sin is sure to leave upon them an ineradicable taint, and to be transmitted to their helpless offspring; when, worse than all, the syphilitic leaves his stain upon whatever he touches to foul the chance passer—man, woman or child—as fearfully as if they had visited the vilest lupanar, it becomes the duty of this Association—the most important of all its duties—to devise some plan for their protection.

Your committee have been charged with the suggestion of such a practical plan. Of the numerous propositions submitted to them, that most zealously advocated provides for the registration and compulsory examination of prostitutes, and the seclusion of those diseased; but this alone your committee does not hesitate to admit to be inadequate.

It has, undeniably, accomplished a wonderful amount of good in continental cities, in the military towns of England, in insular garrisons like Malta, and recently and remarkably n

Japan. On this point the universal testimony of naval and military officers cannot be impeached. Fournier, one of the ablest of living syphilographers, declared to Medical Director Coues that syphilis had been virtually stamped out of Paris, when the advent of the German army reintroduced it ; but he expressed his confidence that it would again be stamped out as before.

Col. Fletcher, of the surgeon-general's office of the United States Army, writes to your committee :

"In 1863, while I was on duty in Nashville, the question of the periodical examination of prostitutes as a protection to the troops stationed at or passing through the city was referred to another medical officer [Dr. William M. Chambers, of Charleston, Ill., Surgeon U. S. Volunteers] and myself. We drew up regulation for the purpose, and for nearly three years the women were examined—at first every two weeks, but subsequently every ten days.

I believe this was the first occasion of any systematic inspection of prostitutes attempted in the United States. Its results may be briefly stated thus:

1. The amount of venereal disease was markedly lessened, so much so that its occurrence came to be looked upon (absurdly, of course) as an imputation on the care of the examining surgeon. I have more than once known a company officer complain that a man was off duty for disease caught of such a girl, at such a time, and demand that she be sent to the hospital.

2. The women, who were at first rebellious, became quite reconciled to the system. I have known them to come to the hospital voluntarily, desiring to be examined for suspected disease.

3. It was self-supporting, the fees paying the expenses of the hospital."

To-day the Nashville prostitute advertises herself in big gilt letters over her front door, before a blazing light, more conspicuously by far than were she enrolled in a police register, while purblind virtue and false morality stalk by and leave no other guarantee to society than the poor creature's own good sense that her house shall not become a focus of disease as disastrous as small-pox or diphtheria.

In ten years, the surgeon-general of the navy is authority for stating, the amount of venereal disease on the Asiatic station has fallen from 425.8 to 112.1 per thousand, a difference of 313.7 per thousand, due to the examination of prostitutes practiced at Hong Kong and in Japan, and the seclusion of infected women in Lock hospitals. The scandalous scenes which disgrace the chief thoroughfares of Liverpool and London and New York, are no longer possible in cities like Paris and Lisbon and Hamburg, where public women are under police surveillance ; nor is it true that cladestine prostitution attains such enormous proportions in places where the Gan Keiro or Yoshiwara confines the whore as in Japan, or where the temples of Venus Meretrix, as in Marseilles, have their own secluded quarter, to be shunned by the virtuous, that it does in Philadelphia and Boston and Brooklyn, where the respectable woman is jostled in every street by unsuspected courtesans, and unfledged boys are lured to disease by young girls in the garb of decent poverty.

"Doubtless," says Diday, "a sensible progress has marked the beginning of this age. With the establishment of a better regulated surveillance, we have seen the coincidence of the diminution of the number of venereal affections, but the persistence of the scourge is an evidence of the insufficiency of these measures." "How is it then," asks Fournier, "that syphilis is especially derived from inspected women? It is, on the one hand, because the relations with this class of women are more numerous; and, on the other, because the surveillance which is exercised over them is completely insufficient."

If the Contagious Diseases Act of England has not accomplished all the good contemplated, it is because the act has not been stringent enough. If syphilis re-entered Paris after having been once stamped out, it was because every avenue for its approach was not carefully guarded.

The idle charge, endeavored to be substantiated by figures, that the inspection of public women has only induced a greater amount of disease, is not worth refuting; but the insufficiency of these inspections is evident.

Because, while discovering women who are diseased at the weekly or semi-weekly visit, it leaves them unprotected against the intermediate approaches of infected men and the unconscious contamination of their subsequent visitors;

Because minute abrasions, hidden deep in the vagina or among its rugæ, may escape detection;

Because a woman may undoubtedly be the vehicle of communicating disease from one man to others, without herself becoming infected;

Because women, who are not avowed and registered prostitutes, shop-girls, domestic servants, saloon attendants, ballet girls, choristers, kept women and the like,are exempt from examination; and chiefly,

Because it ignores the men, who are the original contaminators of the prostitute.

Furthermore, in this country at least, it is a fact that prostitutes, except those of the lowest class, have learned that it is to their own interest to keep well. There are few public houses which do not now have their regular medical attendants, who examine the inmates and treat them when diseased, and the first lesson taught the young harlot is to carefully inspect her male visitor, however gentlemanly his exterior. As the erring country girl brings forth the fruit of her illicit amour as promptly as if wedded, because ignorant of her sinning city sister's devices to avoid such a calamity, so the poor shop-girl, unaware of the sanitary value of syringes and astringent lotions, is diseased by the well-dressed admirer who has turned her head, when the professional whore would have driven him from her room. The young libertine of this day can consequently visit brothels with little risk. The sentimental objection that their location is thereby published and their nefarious trade advertised, is of little weight beside the fact that the young man bent upon sinning might be saved from irretrievable ruin, who, with no less moral turpitude, consorts with the shop-girl whose favors are bought with cheap jewelry, or the house-maid whose chamber is conveniently near his own, and who gratifies him without charge.

While believing that the police registration of brothels and their restriction to designated quarters under sanitary surveillance are in the interest of humanity and morality, and that this no more implies the recognition and countenance of the sin of immorality than the license of rum-shops and the taxation of whiskey-stills presuppose the encouragement of intoxication; believing that the toleration and connivance, through pretended ignorance of their existence, of bawdy-houses, bed-houses, cheap lodging-houses, spurious dentists' offices, dressmakers' rooms and cigar shops, and other notorious places of resort, and the freedom of exposure permitted in public places to the most abandoned and unmistakable strumpets, are the most monstrous blots upon the civilization of this century, and infinitely more reprehensible than their repression and sanitary and disciplinary control by the authorities, your Committee, nevertheless, consider this to be rather a question of public morals than of public health, and they therefore now only recommend as in their opinion the most effectual practicable means of preventing venereal diseases, the enactment by the Legislature of the several States of a law constituting it a criminal offense or misdemeanor to communicate, or to aid or abet in any way the communication of a contagious disease, such as small-pox or syphilis, and empowering and requiring health officials to establish such regulations as may be necessary for the prevention, discovery, treatment and suppression of such diseases.

Deterred by the fear of public accusation and its consequences, no diseased man would thereafter venture to cohabit with any woman, whether public harlot, clandestine strumpet, or his own wife.

Satisfied that the law would punish the unscrupulous wretches who have hitherto so cruelly wronged them with impunity, no woman would care to evade its application to herself, and not only the poor panderer to man's lust would have a greater incentive to preserve her personal cleanliness, but the proprietress of the bawdy-house would be equally responsible for and equally interested in the physical welfare of its inmates.

Inspections would be voluntarily solicited or cheerfully submitted to, and only those perversely negligent of sanitary observances and the degraded habitués of the lowest slums, would become subjects of sanitary constraint, and with the professional burglar and blackleg, be treated as forever objects of suspicion.

It might open the way to false accusations by abandoned women, but they who object to any semblance of protection of vice, can hardly find fault with this additional impediment to sensual indulgence.

Under the operation of such a law it would become the duty of every physician to exact from his syphilitic patient, that voluntary isolation or seclusion which may be necessary to prevent contamination, under penalty of punisnment of the former for his neglect to advise, or of the latter for his refusal to conform to the advice. While it is manifestly impracticable to require a physician to confine his syphilitic patient in a pest-house, it is, nevertheless, his legitimate office to instruct him to shun such contact with his fellow-beings as may expose them to the risk of contamination. Military and naval medical officers already have, and the surgeons of the marine hospital service and those of emigrant and passenger ships, ought to have the right to ascertain the condition, and the power to restrain the liberty of diseased men and others under their charge.

For the syphilitic who marries and contaminates an innocent woman, and begets a diseased child, the law can scarcely frame an adequate punishment, while no code of ethics should permit a medical practitioner to screen his infamy.

The plan proposed by your committee implies the appointment of sanitary officers in every hamlet, village, town and city of the country, subordinated to and controlled by county, municipal, or State Boards of Health, and empowered to investigate and discover every preventable cause or form of disease, syphilis included. They further recommend the establishment of special or Lock hospitals, for the gratuitous treatment of all venereal affections, and in the absence of such hospitals, provision for their treatment without charge and without unneccessary exposure of their victims by health officials under whose cognizance they have come, since, as Dr. Beardsley has well stated, "the cost of treatment for venereal lesions has become so heavy, the prices so exorbitant, that thousands are deterred from consulting a physician through fear of being fleeced." Prof. Andrews quotes the case of a private disease doctor, one of a dozen in Chicago, whose receipts in a single month amounted to $2,000! The special hospitals suggested would naturally supplement and not wholly supplant the private charities, dispensaries, and special wards in general hospitals for the treatment of such as might be reluctant to enter the former, which, however, it is belived, might by thoroughness and care in treatment, not only attract a large proportion of unfortunate sufferers, but ultimately become the means of accomplishing the reformation of many whose misdoings had led them thither to seek relief.

The plan proposed by the committee of the American Medical Association, consisting of Doctors Gross, of Philadelphia, Marion Sims, of New York, N. S. Davis, of Chicago, John Morris, of Baltimore, and J. M. Toner, of Washington, at Louisville, Ky., in 1877, though in the same direction, is less comprehensive than that of your committee. They reported: "That in their judgment there is no possibility of stamping out syphilis until all the nations of the world are protected by proper legislative measures. Great difficulties, unfortunately, surround the execution of laws having for their end the prevention of syphilis, and it is impracticable, at the present time, in view of the ignorance and prejudices of men, to secure more than partial legislation looking to this purpose. We can, therefore, only hope to obtain the passage at first of enactments having in view the regulation of persons engaged in the military and naval service of the government, and also those ordinarily subject to the control and supervision of the police and municipal authorities of cities and large towns, though in the end we are convinced that the extension of this control and supervision to the whole civil population will be be the inevitable legislation of all countries." Your committee have contemplated this wider application of the law in the plan they have unanimously concluded to submit, and which it only remains for them to formulate in the following resolution:

Resolved, That the American Public Health Association earnestly recommends the municipal and State Boards of Health to urge upon the legislative bodies of this country the enactment of a law constituting it a criminal offense to knowingly communicate, directly or indirectly, or to be instrumental in communicating a contagious disease, such as small-pox, scarlet fever, or venereal disease, and giving to the said Boards of Health, and to the State and municipal health officials under their control, the same power in the prevention, detection, suppression and gratuitous treatment of venereal affections, which they now possess in the case of small-pox or other contagious diseases.

Respectfully submitted,

Albert L. Gihon, M.D., Medical Director U. S. Navy, Chairman.
J. M. Keller, M.D., Hot Springs, Arkansas.
George M. Ster berg, M.D., Surgeon U. S. A.
D. C. Holliday, M.D., New Orleans, La.
Preston H. Bailhache, M.D., Surgeon U. S. Marine Hospital Service.
William E. Griffiths, M.D., Brooklyn, N. Y.

A Contribution to the Therapeutics of Starch Digestion.

By Dr. William Roberts, F.R.S., Professor of Clinical Medicine at Owens College, and Physician to the Manchester Infirmary.

The digestion of starch consists as is well known, in its conversion into sugar and dextrine. By this change starch becomes soluble and diffusible, and thereby adapted for absorption from the alimentary canal. It is further known that this conversion is effected partly by the saliva and partly by the pancreatic juice, and that the actual agent of the transformation is a special ferment contained in these secretions. As regards saliva, the ferment goes by the name of ptyalin, and is held to be identical with the diastase of malt. The corresponding pancreatic ferment has not received a distinctive name: indeed, until recently it was not thought to be a separate body; it was rather supposed that the pancreatic juice contained a single ferment which possessed manifold powers, and was able at the same time to peptonize proteids, to emulsify fats, and to convert starch into sugar. It is now, however, ascertained that these several powers correspond to separate ferments. The question has, as yet, been scarcely raised as to whether the diastatic agents of the saliva, of the pancreas, and of malts, are one and the same ferment, or whether there are not more than one—perhaps several—modifications, all capable of doing similar work. It may be regarded as probable, in view of certain recent observations, that the latter supposition will turn out to be correct.

As regards the pancreas, I have obtained evidence, which I need not here particularise, that its diastatic agent is a distinct body from that of saliva and malt. Until further inquiry it will be convenient to use the word "diastase" as a common term, signifying an anylolytic ferment—that is to say, a ferment having the power of resolving the starch molecule into more diffusible bodies of the sugar and dextrine class; and we may conveniently designate diastatic agents according to their local source as malt diastase, salivary diastase, pancreatic diastase, and so forth.

Before diastase can exercise its power the cellulose investment of the starch granule must be ruptured. This is accomplished for the human subject by the art of cooking. In boiling and baking the starch-granules break up under the combined influence of heat and moisture, and the liberated starch swells out enormously by imbibition of water into a mucilage or jelly-like mass. Unless starch is previously changed into this gelatinous state it is acted on very slowly by the diastatic ferment. It is a matter of capital importance, therefore, in the sick-room, to make sure that gruels, puddings, and other farinaceous dishes prepared for the invalid are thoroughly cooked.

Having premised so much, I pass to the consideration of the means we possess of artificially aiding the digestion of starch in cases where that process is defective from deficient diastatic power in the saliva and pancreatic juice. Unfortunately our knowledge of the defect which it is proposed to remedy is very incomplete. Something, however, we do know with fair precision. We know that in infants under three or four months old the saliva has but a feeble diastatic power. I have further ascertained the significant fact that the pancreas of suckling calves is inert on starch, and the inference is strong that the pancreas of the infant at the breast is in the same predicament. It is not probable that the diastatic power is wholly wanting in sucklings—seeing how widely this power is distributed ; but it appears certain that it does not exist in sufficient amount to be available for the digestion of sensible quantities of starchy food. This being so, it is obvious that farinaceous articles are unfit food for young infants unless artificial means are used to assist their digestion. With regard to older children and adults we possess very little exact knowledge respecting defective secretion of salivary diastase, and none at all respecting defective secretion of pancreatic diastase. We may nevertheless pretty safely conclude that whenever the mouth is dry there is diminished supply of salivary diastase. In the febrile state, in advanced stages of most organic diseases, after alcoholic excesses, and in a multitude of morbid conditions of various kinds, the mouth is dry and the saliva is scanty ; and it is reasonable to infer that we shall be doing an important service to our patients so suffering by remedying this defect by artificial means.

In malted barley we have at command an unlimited supply of diastatic power, and it is not surprising that many eyes have been turned in this direction, and that many efforts have been made to utilise this resource as a means of assisting the digestion of starchy food when the supply of natural diastase is deficient. Of late renewed interest in the subject has been created by the introduction into pharmacy of a new class of malt preparations, which, under the name of "malt-extracts," are now challenging the attention both of the profession and the public in a very prominent manner. These articles are now manufactured on an enormous scale.

Malt-Infusion.—The cold-water infusion of malt is an energetic diastatic agent, and trials of its action on various farinaceous gruels have led me to believe that it may with advantage be added to our list of malt-preparations. I have adopted the following method and proportions as yielding a pharmaceutical preparation of convenient standard strength. Three ounces (or three piled-up tablespoonfuls) of crushed malt are thoroughly well mixed in a suitable vessel with half a pint of cold water. The mixture is allowed to stand overnight—that is to say for twelve or fifteen hours. It is then filtered through paper until it comes through perfectly bright. The above quantities yield about seven ounces of product. Malt-infusion thus prepared has a light-brown colour like sherry, a faint sweetish taste, and the odour of beer-wort. It is nearly neutral in reäction, and its sp. gr. is about 1025. It is rendered cloudy by nitric acid, showing that it contains albumen. Its chief solid constituent is maltose, and it is rich in diastase. I was surprised to find that the action on starch of the above standard malt-infusion was quite as powerful as that of average specimens of malt-extract. This shows that in spite of all the precautions used in the manufacture of malt-extract, a considerable amount of the unstable diastase is rendered inert in the process of concentration. Malt-infusion is very prone to fermentation, and it must either be prepared fresh for each day's consumption, or means must be used to preserve it from decomposition. This may be easily accomplished by adding a few drops of chloroform to the infusion, and keeping it in a well-corked bottle. If the taste and odour of chloroform thus communicated to the infusion be objected to, it may be obviated by pouring out the intended dose into a wine-class two or three hours beforehand. The chloroform flies off in vapour, and the infusion is restored to its original taste and smell.

Preparations of malt may be utilised for their diastatic property in two ways; either they may be administered *with a meal*, so as to perform their mission during, and for a short period after, the ingestion of the food, or they may be *mixed with the food beforehand*, with a view to predigest the starchy matters before they enter the mouth. I shall consider these two methods separately.

Administration of Malt-preparations with Food.—The labels on the malt extract bottles direct one or two dessert-spoonfuls to be taken *after* a meal. This is obviously a bad mode of utilizing the diastatic powers of the preparation. A meal is often a long affair; the earlier portions may be in full digestion before the final portions have passed the mouth, and it must be borne in mind that diastase is rendered inert by the acid of the stomach, and that as soon as the meal is penetrated by the acid gastric juice the conversion of starch is arrested, and no further progress is made therein until it starts afresh in the small intestine under the influence of the pancreatic juice. When a malt-preparation is administered after a meal the dose is not properly mingled with the food, nor is it mingled at the right time. A better plan is to direct the patient to sip his dose of malt-extract, or of malt-infusion, as the case may be, during the progress of the meal. The object in view is to thus supplement the action of the saliva, and the artificial substitute should, like the natural article, be mingled with the food in the mouth so that it may have due opportunity for the performance of its destined work before its energies are checked by the rising tide of the gastric acid. Malt-extract is taken in doses of one or two dessert-spoonfuls diluted with water or milk. Malt-infusion may be taken in similar quantities and in the same way; or it may be added to the beverage which happens to be used with the meal, for it has little taste of its own. I may mention that malt-extracts, from their syrup-like consistence and flavour, are suitable for spreading on bread or toast, or for sweetening any kind of farinaceous pudding, gruel, or porridge. An effectual commingling of the ferment with the food is thus ensured.

The mode of proceeding with the malt-infusion is as follows:—A suitable gruel is prepared from wheat, or other flour, or from oatmeal, groats, pearl-barley, arrowroot, or any other farina. The gruel may be made with water alone, or, as is more usual, with the addition of milk or some kind of meat broth. In either case the gruel should be well boiled, and strained to separate the lumps. When the gruel or broth is cold, or at least sufficiently cool to be tolerated in the mouth, the malt-infusion is added. One tablespoonful (well mixed therewith) is sufficient to digest half a pint of gruel. The action is very rapid; in a few minutes the gruel becomes thin from the conversion of the starch. When this point is reached the food is ready for use. The only precaution to be observed in the process is to make sure that the gruel is at least sufficiently cool to be borne in the mouth before the malt-infusion is added. It is not of the least consequence if the temperature be below this point, for the transformation goes on just as well when the gruel is cold as when it is warm; whereas too high a temperature endangers the activity of the ferment, which is rendered inert at and above 157° F. The product of the action of malt on starch is not cane-sugar nor grape-sugar, but maltose, and maltose has very little sweetening power. This is the reason why gruel thus digested suffers little change of taste, so little, indeed, that the addition of it to milk or broth produces scarcely any appreciable alteration of flavour.

Malt extracts are less suited than malt-infusion for the predigestion of farinaceous aliments. Malt-extracts have a somewhat strong sweetening power, and they communicate a dingy brown color to the food; whereas the infusion adds neither adventitious taste nor color. Malt-infusion has also an enormous advantage in point of price. Malt-extracts cost three shillings a pound—the infusion can be made for three farthings a pound. The trials I have made, in actual practice, of food thus concocted, have been highly satisfactory.

I cannot take leave of this subject without adverting to the extraordinary power of extract of pancreas (liquor pancreaticus) as a diastatic agent. In this respect it far transcends any malt-extract. A sample, made by infusing one part of fresh pancreas with seven parts of water, was found, on trial, to possess fully twenty times the diastatic power of the above described standard malt-infusion. Pancreatic extract must therefore be considered as taking the first rank among the available artificial aids to the digestion of starch. It may be administered for that purpose exactly in the same way as the malt-infusion, but in reduced doses. As, however, extract of pancreas has other and probably more important uses as an artificial aid to the digestion of proteid substances, I will content myself here with this brief allusion, and refer the reader who wishes for further information to a paper on digestive ferments published by the writer in the *British Medical Journal* for 1st and 8th of last November.—*London Practitioner.*

The Deadly Climate of Liberia

The Republic of Liberia is in the torrid zone, on the west coast of Africa, between the fifth and tenth parallels of North latatude. Its climate is equatorial and divided into two seasons—the wet and dry, or, as they are called by the natives, the "rains" and "dries." These seasons are not of course, exactly defined and rain occurs in both seasons, but more continuously in the wet. The rainy season may be said to begin in the middle of May; the dry season in the middle of November. The "harmattan" season is in December and January. This wind is peculiarly disagreeable in its effects upon man and beast, and is so drying that the leaves and covers of books curl and seams of furniture open under its influence.

April is the tornado month, but occasionally one blows in May. March is, however, considered the most trying month to the constitutions of new comers, and in it the sun pours down its torrid rays directly from the zenith. The extremes of temperature throughout the year are 65 and 90 degrees Fahrenheit. The worst feature in the climate is its

EXTREME UNHEALTHINESS.

From the dense masses of tangled undergrowth festering under an equatorial sun, from the sluggish rivers choked with an exuberant vegetation, and from the superabundant and rapid growth there arises constantly a deadly miasma, fatal or sickening alike to all new comers, be they black or white.

"Another great drawback to the prosperity of Liberia is the undoubted unhealthiness of its climate. The process of acclimation must be passed through even by colored persons, and for the first six months it is quite as trying to them as to the whites." (Wilson's "Western Africa.") As is well known the colored emigrant who goes out under the superintendence or by the aid of the American Colonization Society is, on arrival, taken in charge by their agents and remains under their care for six months, during which period he is supposed to be acclimated or dies of the fever. If, happily, he survives and is without capital or a snug sum laid up for a rainy day, he goes out into the community enfeebled by the fever and liable to a relapse or other complication caused by it to fight for his life and fortune in competition with the abundant Americo-African and aborignal laborer. With the latter he is at a great disadvantage owing to his greater physical and social needs.

"The Colonization Society's six months' allowance is in many cases just sufficient to escort one who is really dependent on it to the verge of trouble or to the door of starvation. When the society drops you it is 'root pig or die,' and a poor sickly pig finds Jordan is a hard road to travel.' The land is able and willing to yield ample supplies in return for labor, but the winds are not able to support you until the products of the land mature." (James Churchwill Vaughan, Liberian correspondent.) It is very true that the African fever is not as fatal to the negro as to the white race, and it is signally true as has already been observed, that it attacks both races, and is fatal to both in many instances. The average length of life for the white man is stated at four years.

If any evidence of these facts is desired it is only necessary to refer to the long roll of noble martyrs, both white and black, who have given their lives to this cause from its inception to the present moment. Among these devoted men were Mills, Bacon, Gorton, Dix, Seaton, Ashmen, Cary, Randell, Anderson, Humphries, and Skinner, all of whom either died at their posts or came home with constitutions impaired to die. The records of the American Colonigation Society show that up to as early a date as 1859 they had sent out 10,000 emigrants at an expense of $1,800,000, of whom only one-half were then residents. Of 149 emigrants sent to Liberia in 1851 on the bark Morgan Dix thirty-seven died before the close of 1852. Of eighty-eight emigrants sent out to Sierra Leone in 1820 under three agents twenty of them died before the expiration of the year together with the three agents.

Of the dreadful mortality attending this coast fever Mr. Adams gives the following instances :—" On a voyage to Lagos, a town on the coast near the delta of the Niger, and Benin, a town on the river, out of a crew of fifty-five persons thirty-five died. On another voyage to Benin, with a crew of twenty men, ten died in four weeks." (Adams' "Remarks," folio 206). I have taken these accounts at random, as they happen to be at hand. If it is objected that they are out of date it may be answered that the conditions are still unchanged and the results would be the same to-day.

To take a more recent illustration, the bark Azor sailed from Charleston, S. C., in the spring of 1878, with 256 negro emigrants. It is but fair to state that the ship was overcrowded and not properly fitted for the passenger traffic. Twenty-three of these emigrants died on the passage, twenty-seven have since died in Liberia and sixteen had returned up to a date not very late.

A family of ten persons, from Burke connty, Ga., was on her passenger list.

The father and two members of it died on the ship, and two more on arrival at Monrovia. The remaining five have returned to their old home in Burke county by the assistance of friends, white and black. Others who went from the same county have appealed to the charity of their friends there, and the money has been sent them to return. These people report that the land allotted to them was twenty-five miles from Monrovia: the only access to it was by a footpath. Their food was rice and palm oil. Bacon could be had at twenty-five cents per pound, brogans $2.50 to $5 per pair, prints twenty-five cents per yard and no demand for labor.

A returned Liberian, in a communication addressed to the Baltimore *American*, says, in reply to an editorial entitled "Liberia No Paradise," and a letter from William Coppinger, secretary of the American Colonization Society:—"I don't propose to contradict the statements of either, in fact I cannot, for as far as they go they are true: but neither tells all nor dwells upon the main thing connected with Liberia—the awful unhealthiness of the climate and the great sufferings all emigrants have to endure there. I went to Liberia in 1847 with a party of over twenty from Baltimore, and I do not believe there are over two of that party now living in Liberia. Myself and one other came back to Baltimore after the war. Everybody who goes out there is attacked with a very severe fever within twenty days. More or less die in the first attack, but the second, sure to follow, is still more fatal. Some have it lightly, and get about and only suffer from chills and fever afterward, while the greater part enjoy nothing like health for years, if ever. I was one of five children, making seven in all, including father and mother. Father died at once in the first attack, mother within a year, leaving us all young children orphans. Our case was not singular. The same or about the same occurs with emigrants from every vessel; in fact a great majority of the emigrants are poor and helpless, and their sufferings are greater than I can describe. I have known nearly half of the emigrants by a vessel to die within a year, and I could name many families, most of whom are dead; but the mention of names would be of no use, as they are unknown. But take the families that are known. Say the Roberts family—mother and daughter, the President, the Bishop, the Doctor and one other—all dead. The McGill family, from Baltimore—man, wife, daughter and five sons—all gone but one son. The Tragis family—all dead. The Paines—two only surviving. Of the five Presidents two only are alive. Then of the more prominent men Bishop Burns, Governor Russum, Henry Dennis, the Drs. Moore (father and son), the great sugar planter Richardson, Augustus Washington and a host of others well known—all gone. Had Liberia possessed a tolerable climate I should never have left it, and yet I did not leave it merely to save life, my own life; but that life was rendered miserable by witnessing the sufferings of others from that baleful climate. I say nothing about anything else. This fatal bar to emigration and successful growth is enough to deter all who know from attempting it, and for this end solely do I offer this brief truthful sketch."

The evidence of the unhealthiness of the climate is extremely abundant, and the only difficulty is in making a judicious selection. Unsupported opinions on such a subject are, however, of little value, and I make a final quotation from Document No. 273 of the Legation of the United States, dated at Monrovia, Liberia, September 3, 1877.

"These agents speak the truth when they represent that the emigrants will find the soil fertile; that constant summer prevails; that there are mineral wealth, beautiful landscapes, luxurious vegetation, tropical fruits of every description, &c. But they should add that the most primitive agricultural appliances are used for tilling this most fertile soil, such as cutlasses, hoes, bill hooks, &c. Such a thing as a plough is not to be found in use in Liberia. It has been demonstrated that neither horses, mules, nor donkeys can withstand the climate on the seacoast. Horses are found in the interior, but when brought to the coast they sicken and die. Although constant summer prevails, as to temperature, the miasmatic influence caused by the heavy rain alternating with the hot sunshine causes sickness during six months of the year, and during the remaining six months the power of the sun is such that it is almost impossible for any one except a native to work, as it produces inertia, lassitude, want of energy. Indeed, after a man has once had the fever he never in Africa regains the energy he was possessed of before."

THE POPULATION AND ITS CHARACTER.

In 1830, eight years after the settlement of Liberia, its population, exclusive of aborigines, was 1,500. In 1847, the date of the organization of the Republic, the Americo-African population was 5,000, and the number of aborigines occupying their territory 100,000. In 1856, nine years after, the Americo-Africans numbered 8,000 and the aborigines 250,000. The population of Monrovia at this date was 1,500; of Linon, 1,000; of Cape Palmas, 1,000. In 1873, twenty years after the organization of the Republic, the Americo-African population was 20,000, the aborigines numbering 700,000, including the two large, powerful and semi-hostile tribes of Mandingoes and Grebos—the former nearly all Mohammedans, and remarkably intelligent barbarians. Three years later, in 1876, these two tribes were in a state of insurrection against the Liberian government, which insurrection, however, was finally subdued. In 1878 the Americo-Liberians numbered 19,000; the aborigines 701,000, the town of Monrovia having an estimated population of 13,000. We gather from those statistics, imperfect as they necessarily are, the apparent centralization of the population in the larger towns, as has already been observed, and shown by the fact that the town of Monrovia which, in the year 1856, contained less than one-fifth of the entire Americo-African population, in 1878 contained but little less than two-thirds of that population.

The leading tribes among the forty more or less comprising the aboriginal population of Liberia are the Mandingoes and Grebos, already mentioned, who are divided into two factions, the Veys, who are fast being converted to Mohammodanism under the influence of the Mandingoes; the Bassas, Bardines, Kroos and the Pessehs, who are slaves to the Veys.

We then find in Liberia the remarkable anomaly of a republic founded by Christian philanthropists, in the interests of, and as an asylum for, an oppressed and enslaved race, and whose government is conducted exclusively by that race, encouraging and abetting the great evil of domestic slavery and involuntary servitude within their own borders, and by the inefficiency of their government powerless to prevent it. Upon this point Dr. E. W. Blyden, the very able and accomplished president of Liberia College at Monrovia, says: "Domestic slavery exists. It is difficult and impossible for the Liberian government to interfere." (*Methodist Quarterly Review*, July 1872). Of all these tribes the Mandingoes are the most intelligent, the most powerful and the only one which has a written form of law. They are almost entirely followers of Mohammed, as has already been said, and exercise a great influence upon their fellows. The relation of those independent tribes to the Liberian government is extremely weak. They manage their own affairs in their own way, the authority of the government only arising from the agreement of these tribes not to make war or carry on the slave trade.

The preponderance of this great aboriginal population in the Republic is a source of great political and moral danger, which the space allowed me will not permit us to discuss. It will suffice to say that the influence of such a mass of barbarism and superstition within the confines of Liberia upon the majority of the Americo-Africans just emerging from barbarism themselves must be extremely weakening; " while no doubt there are among them many individuals of sufficient intelligence and force to sustain themselves anywhere," the majority must be sensibly and disadvantageously impressed by it.

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ABSTRACTS.

" Qui e nuce nucleum esse vult, frangit nncem."

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On the Alkaline, Salicin, and Salicylate of Soda Treatment of Acute Rheumatism. By DR. ROBERT SINCLAIR, Physician to the Dundee Royal Infirmary, and Physician to the Aural Department.

In the Lancet of Jan. 8th, 1876, there appeared a short paragraph containing a sketch of the results obtained by Dr. Reiss, of the Berlin Metropolitan Hospital, in the treatment of 400 cases of febrile disease by means of the salicylate of soda. Briefly stated, the effects were—rapid reduction of temperature; hastened convalescence; frequently profuse perspiration; occasionally tinnitus aurium, dimness of vision and vomiting; no effect on the pulse; antipyretic effects in inverse ratio to the fatality of the diseases.

About the same time Professor Traube and Staff-Surgeon Stricker were making trials of the drug in febrile diseases, and especially in acute rheumatism. The results exceeded their expectations. Dr. Stricker very early came to the same conclusion in regard to salicylic acid, that Dr. Maclagan formed regarding salicin—namely, that the more acute the attack the better the result. His plan has usually been to administer the drug in fifteen to thirty-grain doses, every hour for six hours. By the end of this time the patient is usually ready to fall asleep, and may be left undisturbed for some time. The same, or similar quantity, is given daily till recovery is ensured. "All the patients thus treated," says Dr. Stricker, were not only relieved of their fever, but also of their local symptoms—*i. e.*, the swelling, redness, and especially the painfulness of their joints within forty-eight hours, most of them even within a much shorter period." The statement is based on the observation of fourteen cases. Dr. Hermann Senator, of Berlin, and others in Germany have come to similar conclusions, which for the most part have been stated with great moderation. The acid and the salts appeared to be used indifferently by many physicians; but the salicylate of soda is now the favorite form, in this country at least. The tendency to cardiac complications is believed to be diminished only in proportion to the reduction of fever; and their presence is little if at all influenced by the drug. Chemically pure preparations must, it need hardly be said, only be used. The toxical effects observed in several cases—namely, deafness, giddiness, vomiting, sighing respiration, delirium, and depression of the cardiac action, as well as the hæmorrhagic erosions of the mucous membrane of the stomach and intestines, discovered by Drs. Wolffberg and Reiss, are probably due in a measure to adulteration with carbolic acid; but they have not been wanting in some cases treated with perfectly pure preparations.

The eighth volume of the St. George's Hospital Reports (1874-76) contains two excellent papers on the treatment of rheumatism by salicin and salicylate of soda. One is by Drs. Whipham and Collyns, the other by Dr. Cavafy.

The cases of Drs. Whipham and Collyns are of little or no value for statistical purposes, for the following reasons:—The number of cases is too limited; some of them were evidently acute, some subacute, some chronic: five only were subjected to salicylate of potash alone, one to salicin alone, two to both drugs at different times, one to salicin, iodide of potassium, and iron, and one to salicin, iodide of potassium, iron, and a blister. But the cases are nevertheless instructive in other ways. In one (case 8) pericarditis was developed three days after the commencement of treatment by salicylate of potash. In another (case 9) some cardiac affection, the nature and termination of which are not at all clear from the report, was developed under treatment by salicin. One thing is clear enough, however, that salicin was not given in sufficient doses. Of seventeen cases of rheumatism and other diseases treated by salicylate of soda or potash, nine suffered from toxic symptoms.

Dr. Cavafy's paper is quite another kind. He records twenty-one cases treated by one drug—namely, salicylate of soda, and the salient points of each case are stated with great distinctness. Moreover, his results are, in the main, a fair illustration of what the drug can do, and of what it has done, in the experience of the profession during the last three years and a half.

The first thing that strikes one on examination of Dr. Cavafy's careful reports and charts is the apparent rapid effect of the drug in relieving pain and reducing temperature; and if this were all that is wanted, we might well congratulate ourselves that "we at last possess a most efficacious remedy for acute rheumatism." But here I, for one, am prepared to join issue with Dr. Cavafy. We want something more. We want a remedy that will speedily free our patients from the stiffness, the anæmia, and the weakness incidental to the disease, and a remedy, moreover, that will enable them to resume their ordinary occupations and pleasures at the earliest possible moment. Let us see how far the salicylate of soda fulfils these objects. The average duration of the rheumatic symptoms—namely, pain, swelling, and elevation of temperature—was 11.4 days; and the average residence of the patients in hospital was 25.3 days. Dr. Fuller, on the other hand, found the average residence of his patients in the hospital, under the alkaline treatment, to be 20.1 days; and if we include twenty-eight patients who had pericarditis on admission, it was still only 22.2 days. I am quite aware that Dr. Cavafy may object to the total duration both of the attacks and intermissions of his relapsing cases being included under the column headed "Duration under Treatment." But my reply to this objection is, that I have taken all his cases into calculation, some of them evidently exceedingly trifling attacks; and I repeat that the drug must be tested by its power of *preventing* relapses and producing speedy convalescence. It has already been shown by Dr. Southey, to whose paper references will shortly be made, that the *attacks* in relapsing rheumatism tend to terminate without treatment. The prevention of the *occurence of relapses* has not been assisted in the slightest degree by the salicylate of soda, either in Dr. Cavafy's cases or mine. It would no doubt be much more satisfactory to separate the continued from the relapsing cases in our calculations and comparisons; and I hope this will be done in all future publications. But whenever we compare our results nowadays with those of the less recent systems, we must, in the interest of truth and fairness, take continued and relapsing cases together, for the simple reason that in former statistical returns the separation has not been made. There are only two other points in these twenty-one cases to which I would draw attention. Although, in a very small minority, cardiac murmurs were developed under treatment, it does not appear that any grave cardiac complication occured in a single case. On this result Dr. Cavafy is to be congratulated. The other point is, that toxic symptoms, some of them very serious, occured in thirteen of his twenty-one cases. Without pretending to explain the cause of the protracted convalescence which many of us have observed in certain cases of rheumatism treated by the salicylate of soda, I should like to throw out the hint that the depresssing effects of this drug may have had some share in the unhappy result.

One of the most valuable contributions ever made to our knowledge of the natural history of acute rheumatism is to be found in the St. Bartholomew's Hospital Reports, from the pen of Dr. Southey, who advises his brethren in attempting to form an estimate of the effects of any remedy, new or old, to distinguish carefully between two forms of the disease, the continued and relapsing. The former, he believes, usually remits about the eighth or ninth day, and about the twenty-first day the patient is able to be out of bed. The latter remits about the seventh day, whatever treatment be adopted. But, while in the former variety convalescence usually proceeds satisfactorily, in the latter the patient, after being apparantly well, and perhaps out of bed, is again seized with rheumatic inflammation of his joints, which once more remits quite suddenly on or about the fourteenth day from the first seizure. This remission may be permanent, and usually is a longer remission than the first, but it may be succeeded by a second, a third, or even a fourth relapse. Dr. Southey does not appear to be so enthusiastic about the latest additions to the *materia medica* of rheumatism as some of our brethren, for he states that though salicylate of soda has done some good, it has never, in his experience, prevented relapses. This periodicity he recommends us to attack with large doses of quinine.

Dr. Julius Pollock, of the Charing-cross Hospital, assures us that he has used salicin without much success; but, he adds, "the evidence in favor of salicylate of soda in the treatment of articular rheumatism is becoming so overwhelming that its great value must shortly be thoroughly established." Dr. Pollock is convinced of the efficacy of the drug, it should be said, in *all* forms of articular rheumatism. He usually gives it in combination with "two or three grains of carbonate of ammonia in an ounce of camphor water, or with tincture or syrup of orange, in orange flower water," and he always gives it freely. In the appendix to the monograph quoted above, Dr. Pollock records his notes of sixteen cases, fourteen being acute, and two subacute rheumatism. The results show, for the most part, that salicylate of soda has considerable influence in reducing fever, abolishing pain, and in many cases bringing about a speedy convalescence. But they show something else that should be carefully remembered by the salicylic zealots. They show three fatal cases in a total of sixteen, and they prove incontestably that the drug does not invariably prevent pericarditis, endocarditis, pleurisy and hyperpyrexia.

In a survey of the chaotic literature of salicylic acid, we cannot omit reference to one of the earliest papers on the subject, by so well-known a writer as Dr. Broadbent, of St. Mary's Hospital. Whatever may have been the extent of Dr. Broadbent's experience at the time he penned the article of April 8th, 1876, his published cases amounted to four, the rapid and satisfactory terminations of which, under salicylic acid, are undeniable. Such results were no doubt a sufficient excuse for a little comfortable comment. But they by no means palliate the injudicious haste with which Dr. Broadbent rushed to the conclusion that "according to present experience, rheumatic fever, when treated by this drug is an affair of two or three days;" a remark that was shortly afterwards echoed by a similar one in regard to salicin, by Dr. Maclagan—"Seeing a patient suffering from acute rheumatism I have no hesitation in assuring him that within forty-eight hours, possibly in twenty-four, he will be free from pain."

Dogma like this cannot be sufficiently deplored. It hinders the progress of therapeutics, imperils human life, and in the long run injures the cause it is intended to help. Unfortunately, the student of the history of medicine is no stranger to confident assertions; some with good foundation, some with marvellously little, and some with none. Dr. Broadbent is surely aware of the good results of the alkaline treatment in the hands of Fuller, Garrod, Furnivall and Dickinson, and he cannot forget that Dr. Hope, after six years' experience, in 200 cases, preferred a line of treatment that included moderate bleeding, calomel, opium, colchicum and salines, for the excellent reason that, thus treated, his patients were usually well within a week, and able to resume their occupation in ten days after the cessation of pain. These facts are not mentioned with the view of depreciating the undoubted value, in certain cases, of salicin and the salts of salicylic acid, but merely for the sake of keeping in view the important truth, that the rapid cure of acute rheumatism is not altogether new.—*Lancet.*

Abnormally High Temperature. By JOHN W. TEALE, Esq., F. R. C. S., Scarborough, Eng.

In February, 1875, I brought before the Clinical Society the particulars of a remarkable case which had occurred in my practice. A young lady having received serious spinal injuries from a fall from horseback, had for sixty days a temperature ranging from 108° Fahr. to 122° and upwards, and eventually recovered. The great length of time that the temperature lasted, enabled me to take my observations with the utmost deliberation, and the greatest care to guard against error or fraud. A great variety of instruments were used by me, seven in all, exclusive of the one used by my brother, Mr. T. Dridgin Teale, of Leeds, who saw the case three times with me in consultation. Most of these afterwards received the Kew certificate of accuracy, and all were supplied by Harvey and Reynolds of Leeds. Observations were taken at all sorts of times, both of day and night, by myself. More than once in the night I took the temperature when the patient was asleep, having carefully placed the themometer in the axilla without rousing her. Observations were repeatedly taken in both axillæ simultaneously, once in the rectum, once in the mouth, and once in both axillæ and between the thighs simultaneously. On these special occasions, the temperatures were also taken by myself. Trained nurses, three different ones during the illness, were constantly in attendance upon her, specially cautioned to watch her. The patient was never made aware of the extraordinary character of her case, and for the greater part of the time was too ill to take any interest in the matter. Hot-water bottles were never in contact with the body, except sometimes to the feet by my special order. I was in the habit of carefully removing the instruments into the adjoining room, and the height was read off in the presence of two or more witnesses.

In July of the same year, 1875, I wrote to the *Journal* a letter replying to various questions and sceptical criticisms on this extraordinary, and at that time unique, case; and I was able, owing to my patient having had a relapse under the care of another medical man, to give that gentleman's experience of her high temperature. This gentleman, Mr. Hind, of Stockton, told me afterwards that on one occasion the heat in the axilla was so great that the mercury burst the tube at the top of the instrument, the index being found in the broken-off air-space at the top.

This, so far as I know, was the first case published bearing on these abnormally high temperatures. It was the first which seriously challenged the then accepted view of physiologists, that such temperatures were incompatible with human life. As long as this case stood alone, it was natural that scientific men, whilst cordially acknowledging the care that had been taken in watching it, should suspend their judgment. I was content to wait, feeling confident that, if my case had been carefully watched and faithfully reported, as I knew it had been, a time would arrive when other cases would be discovered to confirm it. As time went on, first one case and then another was published in the medical journals, all proving the occasional occurrence of temperatures, usually considered to be fatal, in persons who not only recovered, but who, at the time of the excessive temperatures, did not appear to be in imminent danger of dying. This series culminated in that of Dr. Roddick, of Montreal, quoted by Dr. Donkin in his paper in the *British Medical Journal* for December 20th last, with a recorded temperature of 117° Fahr., in which the mercury was lost in the bulb at the top of the thermometer. The temperature reached 117° Fahr., but how much higher it might have gone cannot be known, as the instrument could not record it.

I claim Dr. Donkin's interesting series of cases as a strong corroboration of the truthfulness of mine. The following points seem now to be clearly established: 1. Temperatures above the degree formerly supposed to be necessarily fatal do sometimes occur without a fatal issue; nay, even without extreme peril to life. 2. Such exceptional and excessive temperatures as a rule end in recovery. 3. The conditions of body in these cases of excessive temperature appear to be distinct from the conditions existing in fevers, in which the rule as to the extreme peril of temperature of 107° and upwards remains unassailed.

What the explanation of these rare and exceptional cases may be it is for physiologists to work out, but it can never be settled if they shut their eyes to facts which contradict their theories and relegate such cases to oblivion.—*British Medical Journal.*

On the Peculiarities of Ringworm and its Treatment. By Dr. Robert Liveing, F.R.C.P., Lecturer on Diseases of the Skin to the Middlesex Hospital.

Our most neglected class of children—"gutter children," as they are called—are practically exempt from tinea tonsurans. The chief reason of this is that they do not attend school, and do not, as a rule, associate with school children, and perhaps partly because they do not use brushes. This fact is at all events sufficient to explode the old idea that ringworm has anything whatever to do with want of cleanliness. It also leads me to call your attention to the way in which the disease is propagated—namely, by schools. They are, so to speak, the nurseries of ringworm. When it appears in a family it is almost always introduced by the child who goes to school. One of the most striking peculiarities of this affection is the influence that age exercises upon it. We rarely meet with ringworm of the scalp in an adult, and when it attacks the body, it often disappears again without treatment—in short, it dies a natural death. And what is still more remarkable is that even inveterate cases of the disease, that have defied all treatment, usually get well as soon as the child reaches the age of fifteen or sixteen. There are, of course, now and then exceptions that prove the rule. One might be tempted to suppose that vegetable parasites have a predilection for young and tender skin, but this, at all events, does not apply to the parasite of pityriasis versicolor, which is essentially an affection of adult life. Again, infants at the breast often get ringworm, but I have never met with a case in which the eruption has given much trouble; the mildest remedies cure it. No doubt the imperfect development of hair may account for this fact.

Let me next direct your attention to some peculiarities in the *appearance* of tinea tonsurans. Generally, nothing is easier than the diagnosis of this affection. One or two scurfy, itching spots on the head, of somewhat rounded form and studded with opaque, broken, and twisted hairs, leave no doubt as to the nature of the disease. But the cases that come before us are not always of this typical kind, and that the diagnosis is somewhat difficult is proved by the fact that a difference of opinion often exists as to the nature of a particular case. Every one knows, for example, that it is a really difficult matter to differentiate between tinea tonsurans and favus in certain stages of the latter disease; but as you will very rarely be called upon to treat favus in this country, I shall dismiss that part of the subject. You are well aware of the fact that ringworm of the scalp presents a different appearance from ringworm of the trunk. If you observe a large number of cases of ringworm, you will find a certain proportion which have, in addition to the eruption on the scalp, a few small, red, scurfy spots on the face, neck, or other parts of the body; you have little difficulty in determining that these red spots are produced by tinea tonsurans; but supposing similar spots occur on a child who has no ringworm of the head, and you have no history of the disease as to these in the family, you may then have great doubt naturally, for they closely resemble little spots of so-called simple pityriasis or dry eczema. I would remark, however, that the ringworm spot is usually of a brighter color, and has a more abruptly defined margin; if one of the spots is of a rounded form, with a narrow, bright, slightly raised edge, that will of course greatly help your diagnosis. A *solitary* round, scaly spot, even without a distinct margin, should always make you suspect tinea tonsurans, and induce you to make a careful examination. Returning to ringworm of the scalp, which is far more important than that of the body, we notice that there are several forms or stages in which the diagnosis is a little difficult. (1) In a very early stage, before the hair is visibly affected, we find only red, scurfy little spots, which may be very easily overlooked or mistaken for some other affection. As this is an important stage of this disease with reference to the treatment, it is necessary to be on the look-out for it. The hair will generally be found to be abnormally brittle over these spots, although to the eye it may appear natural. (2) We now and then meet with chronic cases in which the hair grows freely over the head, no patches of any kind are found, and the skin looks generally healthy; but a careful examination with a magnifying glass detects isolated or small groups of hairs, scattered here and there over the head, presenting all the characters of tinea tonsurans. Dr. Adler Smith, who has had great experience in this affection, tells me that these are cases most frequently overlooked by medical men, and supposed to be cured when they really are not. This is hardly to be wondered at when we consider how difficult it is to find isolated hairs; indeed, if you do not know beforehand that the child has suffered from tinea, there is nothing to lead you to a correct diagnosis. (3) Tinea tonsurans is easily masked by attendant eczema, especially when the crusts are thick; under these circumstances a careful examination of some of the hairs is necessary. *A shedding of the hair in patches* in a case of eczema, should always make you look out for tinea tonsurans. (4) I have occasionally pointed out to you examples of ordinary ringworm which lead to *perfectly smooth bald patches*, not to be distinguished by the naked eye from alopecia areata; indeed, if you have not the opportunity of watching these cases as they pass through their early stages, it is almost impossible to say whether you have before you area or tinea tonsurans; all the diseased hairs have, in fact, been shed. I have on several occasions met with an instance of this in a family affected with tinea tonsurans, the other cases being of the ordinary form. As I have elsewhere pointed out, it is this variation from the usual course that has given rise to the erroneous idea that there exists a disease—*tinea decalvans*—distinct from tinea tonsurans on the one hand, and from alopecia areata on the other. (5) You may possibly mistake some few cases of alopecia for tinea tonsurans. Under ordinary circumstances it is very easy to distinguish between the two. In area the hair comes off freely and quickly, leaving a clean bald patch; moreover, it occurs especially at the occiput and behind the ears, and the eyebrows are often affected; but now and then the hair is not shed freely, and we find partially bald, round patches, covered pretty thickly with short, stumpy and broken hairs, having a close resemblance to common ringworm. A little care and the microscope will, however, enable you to avoid an erroneous diagnosis. We have now under observation, as an out-patient, an example of this in a young man in whom the hair is much thinned and broken over nearly the whole of the scalp, but which is nowhere quite bald, and if he were not losing his eyebrows and eyelashes, we might have some difficulty in recognizing it as a case of alopecia areata, though in this particular instance the age of the patient and the history of the attack would preclude the possibility of its being common ringworm.

There is a very important question which you will be constantly asked, and that is as to the communicable nature of ringworm, and at what period it ceases to be contagious. Now, strictly speaking, it is so until it is quite cured; indeed, as long as scurfy spots remain, even though the hair be growing freely, it may be propagated. It is, however, far more contagious when it first appears, before any remedies have been applied, than it is while under treatment. The best remedy to prevent its spreading amongst children, when they are obliged to associate together, is the carbolised glycerine of the British Pharmacopœia, either pure or diluted with a little more glycerine; it should be well rubbed all over the scalp every morning. This acts in two ways: (1) The carbolic acid produces its usual effect on organized matter; and (2) the glycerine prevents particles of scurf from being dispersed. Of course, the chief objection to this treatment is that the smell of the carbolic acid is very disagreeable to some people; on the other hand, it is sometimes impossible to separate children entirely, and any means of preventing the propagation of the disease is valuable. In addition to this, the carbolised glycerine has a distinct curative effect.

And now as to the *treatment* of this troublesome malady. Nothing is easier to cure than tinea tonsurans of the trunk, or more difficult to deal with than the same disease when it is well established on the scalp. It is important that you should understand how the remedies in common use act. They may be conveniently divided into two classes—(1) Those which act by setting up sufficient inflammation in the skin to lead to the destruction of the disease; (2) those of a milder kind, which act simply as antagonistic to the development of the Trichophyton tonsurans. To the former class belong such remedies as acetum cantharidis and strong acetic acid; to the latter belong sulphur ointment, the white precipitate ointment, and sulphurous acid lotion. Many remedies combine, as it were, these two properties; as, for example, chrysophanic acid ointment, iodine liniment, and strong carbolised glycerine. How are you to choose between all these and many other remedies? You must be guided by circumstances, and take into consideration both the age of your patient and also the extent of the mischief. *Strong remedies are always contra-indicated in very young children;* a little tincture of iodine painted on once a day for a few days, followed by the use of the white precipitate ointment, is all that is necessary. In older children stronger treatment must be used, but even then you must be guided in your choice by the extent of the mischief. It is very unwise to make a *large* sore place on the scalp, as it will very likely give you and your patient more trouble than the ringworm itself. If, however, the disease is in an early stage, and consists of one or two small circumscribed spots, your best plan is to cut the hair short all round the spots, and apply with a brush Coster's paste, acetum cantharidis, or iodine liniment. At this stage a few applications will sometimes arrest the mischief. A single painting with pure carbolic acid is thoroughly effective, but it is a strong remedy, and gives some pain. Always bear in mind that it is very unwise to trust strong remedies to unskilled hands. When the disease extends over a large surface you must be content with using milder measures—tincture of iodine of double strength painted on every day is a good and safe mode of treatment. This may be followed up by the use of the nitrate of mercury ointment, diluted according to circumstances, or an ointment containing the red and white precipitate of mercury and sulphur, or the oleate of mercury (10 per cent.). For many years I have used in certain cases goa powder or chrysophanic acid ointment (thirty grains to the ounce is usually strong enough), and I have found it a very effective remedy, but there are great drawbacks to its general use. First, it stains everything with which it comes in contact, and in the second place we are uncertain as to the amount of inflammation it may set up; some children bear it well, while in others it produces so much irritation, swelling, and discolouration of the skin as to alarm those who use it. It must therefore be used with caution, and patients should be warned of its properties; nevertheless, I repeat, it is a very effective remedy.—*Lancet.*

On some Points Connected with the Diagnosis and Treatment of Scabies. By Dr. ROBERT LIVEING, F.R.C.P., &c.

In order to avoid mistakes, it is well to know the circumstances under which this disease is generally contracted. Every medical man knows that it is most frequently introduced into families by one of the servants, and in any suspected case he always very properly examines all the servants; but if he fail to find any scabies amongst them, he is generally unable to account for its appearance. Now, I wish to point out a fact which I have noted for a long time past, and that is, that every autumn I have an unusual accession of patients suffering from scabies, and that these patients have usually been travelling on the Continent. I am now quite satisfied that the disease is not unfrequently caught in this way. I am not able to offer any information in detail as to how it is contracted abroad, but of the fact I am quite sure.

There are certain mistakes often made with regard to the *diagnosis* and *treatment* of scabies, which I find repeated with great regularity, and which I propose to point out. With regard to the diagnosis, errors often occur under the following circumstances. 1. A person, we will suppose, has suffered from time to time from attacks of eczema of the hands or elsewhere, and his medical adviser knows the fact; this person contracts scabies; what can be more natural than that his medical attendant should overlook it? The patient himself believes that he has, perhaps, a more obstinate attack of eczema than usual, but nothing more, and he is at first not surprised that he does not get well under the usual treatment. 2. In children, scabies in an early stage is often masked by a copious eruption of urticaria, and attention is naturally drawn to the more striking features of the eruption, the cause being overlooked; this mistake may be made by anyone, even the most careful, but it is generally soon corrected. 3. It is not very uncommon to meet with well-marked cases of scabies in which the hands and wrists are free from eruption; and, if the medical man be not aware of this, he is apt to be misled by it. I attribute this occasional freedom of the hands from eruption to the present very common use of more or less medicated soaps. In nearly all the instances of the kind that I have met with, I have been able to trace the cause to this source. In the case of hospital patients, the same results have been produced by certain occupations. In all doubtful cases of scabies in males, the *lower part of the abdomen*, *buttocks*, *and penis* should be examined; the appearance of the skin on the penis is very characteristic.

In women, where a thorough examination is more difficult, we should especially look out for eruption about the mammæ and axillæ. In young children, the hands sometimes escape for a time, while the feet and buttocks are early attacked. 4. A very common error occurs in the following way. A patient suffering from an eruption consults a medical man, who believes it to be the itch, and orders accordingly the sulphur ointment of the *Pharmacopœia* to be rubbed in; the patient, wishing to get rid of his trouble as fast as possible, carries out the treatment very vigorously; he is probably much better after the first and second application, but he soon begins to get, as he thinks, worse; the eruption extends and becomes more copious, and the more he applies the ointment the more he suffers; after a time, he returns to the medical man, who finds him covered with an irritable eczematous eruption; and, as he now fails to find anything distinctive of itch, he is apt to think that he has made a mistake. But the fact is that he has probably made no mistake, except that of prescribing a very strong ointment, which his patient has used too freely, and thus, while he has cured the scabies, he has produced a great amount of artificial eczema by the process of cure.

With regard to the *treatment* of scabies, errors sometimes occur. The one which is by far the most common, I have already indicated above, namely, that of using a sulphur ointment too strong, and of continuing its use too long. Of all remedies, not one is so effective as sulphur ointment properly applied. An ointment half the strength of that of the *British Pharmacopœia* is quite strong enough, and the best time to use it is at night, when it should be rubbed all over the body, except the head but especially on the hands, buttocks, and lower part of the abdomen, and then the underclothing used during the previous day, namely, socks, gloves, drawers, and jersey should be worn during the night; this thoroughly disinfects the clothes, and at the same time keeps the ointment well applied to the skin. In the morning, a warm bath may be taken, and no treatment followed during the day. For three nights the process should be repeated, but never longer; subsequently a little ointment should be well rubbed on the hands, wrists, and buttocks for a few nights. All treatment should then be discontinued for at least a week, when, if necessary, it may be repeated for one or two nights, or a milder ointment might be used. It is sometimes difficult to say whether a case of scabies is cured or not; under these circumstances it is very convenient to use an ointment which does not irritate or annoy the patient by its disagreeable smell, and which at the same time will complete the cure. A most excellent ointment of this kind is made with balsam of Peru (two drachms and one ounce). The styrax ointment is also thoroughly effective, but less agreeable.

With regard to sulphur baths, I would say that they are not nearly as effective as sulphur ointments. I lately ordered sulphur baths (as being more agreeable than ointment) for a pupil of my own who was suffering from scabies; he took six or seven and then came to me much better, but not cured; I advised more baths, but did not see him again. He had in all about fifteen baths, and then went home to the country thinking himself cured; unfortunately he was not, and he conveyed scabies to his family. This is not the first time that I have found sulphur baths fail. They are, however, useful under certain circumstances; it may, for example, be very inconvenient to apply sulphur ointment at night. Again, in cases where there is much secondary eczema set up with extensive excoriations, the application of sulphur ointment is very irritating. Under these circumstances, it is very useful to begin with a few baths, which generally produce an excellent effect; this may be followed up by the application of ointment to those regions known to be specially affected.

Lastly, with regard to disinfecting outer clothes and bedding, it can be easily done by sulphur fumigation or baking. In all cases of long standing, the clothes and blankets, etc., should be disinfected, but it is never necessary to extend this to the bed itself.—*British Medical Journal.*

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

*Three Cases of Knee-Joint Abscess in Children.** By EDMUND OWEN, F.R.C.S., Senior Assistant-Surgeon to St. Mary's Hospital and to the Hospital for Sick Children.

The three patients whom I have the honor of showing this evening are not selected; they happen to have been lately under treatment together, and are, indeed, the only instances in which I have recently had occasion to open the knee-joint for suppurative arthritis. Short as the series is, these cases offer, I think, an interesting subject for discussion and criticism; and especially so as you have just had the opportunity of examining the present condition of the joint in each instance. The eldest child only was treated by me as an in-patient; the others were brought as out-patients to the Children's Hospital.

Briefly, the line of treatment has consisted in free incisions into the joint and subsequent free drainage; in absolute and prolonged rest of the limb with compression of the articulation; in constitutional and dietetic support, and (need I say it?) in local cleanliness. But having remarked that I have employed cleanliness in the treatment of these diseased and opened joints, the conclusion that I adopted the high ritual of spray and the vestments of gauze would be both hasty and inconsequent. I wish it, however, to be thoroughly understood that I did my best to keep the articulations clean, both on the exterior and in the interior. I would like it to be understood also that by no means do I bear the spray and gauze ill-will; I even look upon them as a kind of safety lamp which may well be carried by those who work in an atmosphere of surgical fire-damp, as well as by those who, trespassing in the seductive regions of speculative surgery, may on occasion require evidence of their having started on their excursion without neglect of approved precaution. To the great champion of cleanliness in our art I personally owe a boundless debt of gratitude, but to certain of his enthusiastic disciples who, to speak within bounds, seem to consider those who do not adopt their creed as wilfully obstinate or morally oblique, I will delicately put this question, could any other method of treatment have obtained better results than those which we have now before us?

Our medical journals are continually called upon to publish reports of cases, trifling and serious, which have recovered after "antiseptic treatment," so this short series out of the groove cannot now but be of interest. Possibly even they may help to show that *post* and *propter* when employed in connection with a certain surgical practice need not be confused even when half-obscured in a cloud of carbolised vapour.

The first case is that of a girl of

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* A Paper read before the Medical Society of London, Jan. 1st, 1881.

about four years of age. A little more than two years ago she was brought into the out-patient room in Great Ormond street in a most pitiable condition. The left knee was red and enlarged from a collection of fluid in the interior. So painful had the joint been that appetite and sleep had left her. Moreover, she had several attacks of convulsions—the rigors of childhood. Ten months previously, the mother said, the child had fallen off her chair, and directly afterwards the knee had begun to swell; but though the swelling had steadily increased, the child had been able to limp about until three weeks ago. The whole limb was red and swollen. She was at once put to bed, and the Registrar (Dr. Abercrombie) going round next morning noted that the leg and thigh were the seat of erysipelas, and that there were several blebs on the leg. The glands in the groin were enlarged and tender Though there was a small sinus leading towards, or into the joint, from the inner side, from which a thin fluid was oosing, the patella was floated from off the femoral condyles. The temperature was just under 101° Fahr. On the third day after her admission—that was when I next saw her—chlorform was administered, and a free incision was made on each side of the knee, much thin pus escaping. The finger passed into the interior of the joint detected much thickened and pulpy synovial membrane, but no diseased bone. The joint having been thoroughly washed out with a weak solution of chloride of zinc, a drainage-tube was passed through it, and the limb was put up again on a slightly bent tin splint. Nevertheless, the erysipelas continued to advance, and blebs now had made their appearance on the thigh, and the temperature went up two or three degrees. The child was taking quinine, iron, and wine; in less than a week the temperature began to track the chart along the normal line. For convenience in the washings, which were daily performed by the house-surgeon, Mr. Kempe, the back splint was changed for extension by the stirrup, weight, and pulley. A month after her admission the joint was stripped, the drainage-tube still lying in the outer wound; and at the end of another like period she was taken home in excellent condition, the wound, though steadily closing, still weeping a little. But at home she did not prosper, and in three weeks she was again in hospital for ten days. Since that time she has steadily improved, the limb being fixed upon a back tin splint. It is no exaggeration to say that in function and movement the damaged knee is now as good as the other. The child runs about on it all the week, and kneels upon it on Sundays. It is absolutely free of pain.

The second case is that of a little boy. The mother says that the disease was started by a fall out of bed upon the knees, after which the right joint began to swell. At the beginning of last year he was sent to me by Dr. Goullet, of St. John's-wood, for an attack of subacute synovitis. The child was then under a year and a half old. We fixed the limb on a tin splint, and Dr. Goullet looked after the child until April, when, in spite of the treatment adopted, the inflammation had run on to suppuration. In this case only one incision was made into joint, and that on the inner side. The solution used for washing was weak tincture of iodine. Three days after that operation it was noted that the child had lost its thirst and that its nights were quiet. Previously it had been in the habit of starting in its sleep and awaking with a scream. Seven months later it was remarked at the side of the prescription-paper, under the date of Nov. 17th:—"Has been wearing the splint up to to-day. The wound has healed, but there is a good deal of eczema around its site. There is good flexion and power of movement in the joint, but there is still some fulness about the ligament of the patella from the old thickening of the synovial membrane. The health is excellent." There is no tenderness at the knee, which can be bent, without disturbing the child, to less than a right angle. Though the skin over the old wound is not sound-looking it is serviceable enough, and the child cruises about the room without inconvenience.

The last case is that of a baby of four months, who was brought as an out-patient from Hendon at the end of last June. Against his name in the case-book I then wrote: "Subacute synovitis of the left knee-joint," and fixed the limb on a bent splint with strapping and soft bandage. But by the tenth day it was evident that a purulent collection occupied the synovial pouch. Excessive pain in the part had driven away sleep, and the child had attacks of convulsions. The knee was red, hot, swollen, and very tender.

By means of incisions, and injections of weak tincture of iodine and water, much thin sero-purulent fluid and flakes of thick and curded pus were washed out of the joint, and the limb was then packed round with vaseline lint and tenax, and fixed to a splint. Gradually the splint was straightened, and by the middle of September drainage was discontinued, and the wounds healed up. The child never had a bad symptom. In October last there was free movement in the joint, and the infant was flourishing; and, as you have seen to-night, the child allows full examination of the capabilities of the joint to be made. He even flexes it of his own accord; and, his mother says, tries to walk on it.

I am well aware that there is nothing of an extraordinary nature in these reports and cases, unless it be the simplicity of the treatment adopted. A treatment somewhat similar to that described by Mr. Sampson Gamgee, with this exception—improvement, I will call it—that the pus is straightway washed out of the joint, instead of being allowed to ooze out. So the joint gets a well-considered and fair start towards the goal of recovery.

In conclusion, I will venture to express the opinion that the chief requisites for obtaining such happy results in the treatment of acute joint-abscess in childhood are the early employment of clean and free drainage and the prolonged continuance of absolute rest. And these are conditions which are fortunately very generally obtainable.

A *Case of Addison's Disease: Post Mortem Examination: Remarks.*

For the following notes we are indebted to ARTHUR G. BLOMFIELD, M. B., M.R.C.S., House Surgeon. Norfolk Hospital, Eng.

John M., aged 26, was admitted into the Lynn Hospital, on June 19, 1880, suffering from extreme weakness and bronzing of the skin. The history given was, that until about six months previously, he had always enjoyed good health and been fair. At this time he began, without apparent cause, to become weak; this weakness gradually increased, so that he had to give up his employment on the Midland Railway, at Derby; and though the history was not very clear on the point, he said that he did not notice that his skin was becoming of a dark brown color until a month or six weeks before his admission.

State on Admission.—He was evidently of naturally spare build; there was no marked emaciation. There existed a uniform brown discoloration of the face, markedly so about the forehead, and also over the front of the neck. There was a bluish-black discoloration in the lower lip close to the junction of the skin and mucous membrane. The brown color of the skin was also very evident over the whole trunk; the areolæ of both nipples were broad and dark brown in color. The backs of both hands (*i.e.*, the exposed parts) were of a darker color than the arms. The color, too, was more marked around the loins and over the anterior aspect of both knees. The weakness was extreme; he lay on the bed in a semi-comatose condition; he could, however, be easily roused, and replied rationally but abruptly when asked questions, but speedily lapsed into his previous state, with the eyelids half closed and the conjunctivæ congested. When seen first, a week before his admission, the weakness was not so marked, and the conjunctivæ were of a pearly-white color. On June 20th and 21st, there was persistent and uncontrollable vomiting of a yellowish-brown fluid, and whatever he took was at once rejected; but for a few hours before his death, on the 21st, the vomiting ceased. He frequently turned over from side to side. The breathing was shallow and quiet. The heart's action was distant and very feeble, the pulse all along being markedly feeble and indistinct, and during the last three hours of life could not be felt at either wrist. He passed very little urine, and the bowels were confined. He died quietly from asthenia on the evening of June 21st.

Post mortem examination, twenty hours after death. Rigor mortis was very well marked. The heart and lungs were normal. The pleura was not thickened, nor was there the slightest trace of fluid in the pleural cavities; the only appearance to be noted was the existence, especially between the visceral and parietal layers of both pleuræ, of delicate and abundant white bands, looking like lymphoid or young connective tissue; the appearance was not that of previous pleurisy. The peritoneum and mesentery were healthy. The stomach contained a small quantity (not measured) of a yellowish fluid, and with the exception of a few scattered points of congestion (like minute ecchymoses), was healthy. The intestines, spleen, liver, and kidneys, were normal. Behind the stomach there existed a good deal of connective tissue involving the solar plexus and semi-lunar ganglia; the splanchnic nerves were prominent, but no minute dissection was made of their ganglia. Both suprarenal capsules were enlarged, prominent, and hard to the feel. The left was especially enlarged; both were imbedded in connective tissue and fat, and adhesions existed on the right side between the capsule and the liver and kidney; the left was adherent to the left kidney, but not to the spleen. The left capsule weighed half an ounce. On cutting into the suprarenal bodies, the outer portion, looking like a thickened investing membrane, was of a gray color, semi-transparent, and of a firm consistence; within this previous active inflammatory changes had taken place, as evidenced by its thickness and by the adhesions to neighboring organs. Within this there was a mass of a uniform yellow color, firm when cut, tending to split into flakes; and by very little manipulation this mass could be tilted, as it were, out of its bed, so that any relation which had previously existed between it and the outside opaque investing membrane had been destroyed in the inflammatory process. This putty-like central mass was uniform in consistence and apparently devoid of all blood-vessels. Here and there (but this was not marked) there were a very few yellow dots from which a friable material like soft, yellow tubercle could be pressed. Looking at the pathological state found on dissection, it was probable that the case had run a rapidly fatal course. The original structure of these organs was entirely destroyed, and for the sake of clearness the capsules in this case were in what Dr. Wilks describes as the *first stage* (*Vide* Reynold's *System of Medicine*, vol. v., page 355). Dr. Heneage Gibbes kindly undertook the microscopic examination of the right suprarenal capsule, and his report of the appearance presented is subjoined: "I find the usual state of things in Addison's disease; nearly the whole of the suprarenal structure has become disintegrated, and is nothing but *débris*. In one or two places a few of the cells can be recognized lying amongst others, wholly or in part broken down. There is a large development of fibrous tissue round the capsule. I find an infiltration of small cells in one part, which, I think, is inflammatory. The capsule is enormously hypertrophied, and the interfascicular lymph-spaces in it are very large and numerous, with large corpuscles (connective tissue) lying in them. Nearly the whole of the adrenal proper is converted into a mass of *débris*, caseous in some parts. In one part some of the original cells are to be seen in various stages of disintegration.

Remarks by Dr. Dale: I have seen four cases of "bronzed skin" in this neighborhood during the last five years, two in private and two in hospital practice. Of the former, one was a woman just over thirty, who died after a short illness, the chief symptoms being frequent vomiting and debility. The other was an aged woman, whose symptoms were simply excessive wasting and debility, with, of course, in both cases, the characteristic discoloration of the skin. Of the latter two cases, one a woman between fifty and sixty, is under treatment at present as an out-patient, and has no symptoms except "bronzing" of the skin, with great weakness; the other is the case reported above, which, as will be seen, was marked by negative symptoms only, in addition to the "bronzing," until within a few hours of his death; and is the only one in which a necropsy was obtained.

York County Hospital. Elongation of Femur After Hip-Disease (under the care of Mr. JALLAND). For the notes of this case we are indebted to Mr. W. H. BATTLE, House Surgeon.

E. S., aged 12, was admitted under the care of Mr. Jalland, on November 18th, 1880. Her family history was good. One brother was stillborn; one brother and one sister, aged 14 and 9 respectively, were quite healthy. Six years ago she was in the York County Hospital for eighteen weeks with disease of the right hip-joint. She had much pain later in the hip and knee. She was treated by rest and extension, and stated that she could walk "quite straight" on leaving. Three months ago, her mother noticed that she walked "all of a side," and about the same time she began to suffer from pain in the right thigh, and also slightly in the knee of the same side; the pain jumped, but did not prevent her from sleeping at night.

On admission, she walked with a perceptible limp; and, on standing, the right shoulder was the higher of the two; and this was more especially marked when standing with both knees straight, her usual attitude being with the right foot advanced, the toes turned out, and the knees slightly bent; she felt most comfortable whilst in this position. The right buttock was flattened, but there was no further sign of disease in actual progress. There was no swelling or pain about the joint, the movements of which were perfectly free. When lying on her back, the right internal malleolus appeared to be about an inch below the level of the left. The measurements were as follows: from the right anterior superior spinous process of the ilium to the internal malleolus, 28 inches; from the left anterior superior spinous process of the ilium to the internal malleolus, 27½ inches; length of tibia on each side, 11½ inches; line drawn from the anterior superior spine perpendicularly backwards, joined at right angles by one from the top of the great trochanter, measured, on the right side, 2½ inches, on the left 2 inches. The right trochanter was thicker than the left. The circumference of the right half of the pelvis, measured round the upper part of the trochanter on each side, was almost a quarter of an inch more than the same measurement on the left.

MEDICAL SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

A Tribute To Dr. J. Marion Sims.

Medical Society of South Carolina,
CHARLESTON,
February, 1881.

At the regular monthly meeting of the Medical Society of South Carolina held to-day at 7 o'clock P. M., Prof. Middleton Michel, M. D., President, presiding, announced officially the arrival of Dr. J. Marion Sims in the city and that he was an invalid at the Charleston Hotel; and then referred in graceful terms to the character and professional attainments of this distinguished physician and surgeon.

The following resolutions were then offered by Dr. Francis L. Parker, and were unanimously adopted:

Resolved, That the Medical Society of South Carolina express to Dr. J. Marion Sims its appreciation of the eminent and distinguished services he has rendered Medical Science, particularly as the originator and promulgator of the science of gynæcology, and the benefits he has conferred upon suffering humanity, and the honor he has reflected by his great abilities upon his native State, South Carolina.

Resolved, That this Society has heard with painful emotion of his recent illness; that it extends to him its congratulations upon his partial recovery, and sincerely hopes under the providence of God that his visit to his native Southern climate may restore him to health and continued usefulness in the profession which his originality and skill have contributed so much to elevate and adorn.

Resolved, That this Society tenders to Dr. J Marion Sims a public reception at such time as he may designate.

Resolved, That a committee of three be appointed, of which the President shall be chairman, to present these resolutions to Dr. Sims with assurances of the respect and esteem of this Society.

On motion of Dr. John L. Ancrum, it was resolved that these resolutions be published in the daily papers.

MIDDLETON MICHEL, M.D., Pres.,
FRANCIS L. PARKER, M.D.,
R. A. KINLOCH, M.D.,
Committee Medical Society of S. C.

JOHN FORREST, M.D.,
Secretary Medical Society of S. C.

AMERICAN MEDICAL ASSOCIATION.—The Thirty-Second Annual Session will be held in Richmond, Va., on Tuesday, Wednesday, Thursday, and Friday, May 3, 4, 5, 6, 1881, commencing Tuesday at 11 A. M.

"The delegates shall receive their appointment from permanently organized State Medical Societies, and such County and District Medical Societies as are recognized by *representation in in their respective State Societies*, and from the Medical Department of the Army and Navy, and the Marine Hospital Service of the United States."

"Each State, County, and District Medical Society entitled to representation shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number: *Provided*, however, that the number ot delegates for any particular State, territory, county, city, or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association."

Secretaries of Medical Societies as above designated are earnestly requested to forward *at once*, lists of their delegates.

SECTIONS.

"The Chairman of the several Sections shall prepare and read in the general sessions of the Association, papers on the advances and discoveries of the past year in the branches of science included in their respective Section. * * * *"—BY-LAWS, Art. II., Sect. 4.

Practice of Medicine, Materia Medica, and Physiology :

Dr. WM. PEPPER, 1811 Spruce St. Phila., Pa., *Chairman.*

Dr. J. A. ASHBY, Baltimore, Md, *Secretary.*

Obstetrics and Diseases of Women and Children :

Dr. JAS. R. CHADWICK, cor. Marlborough and Clarendon St., Boston, Mass., *Chairman,*

Dr. JOS. TABER JOHNSON, Washington, D. C., *Secretary.*

Surgery aud Anatomy :

Dr. HUNTER McGUIRE, Richmond, Va., *Chairman.*

Dr. DUNCAN EVE, Nashville, Tenn., *Secretary.*

State Medicine :

Dr. JAS T. REEVE, Appleton, Wis., *Chairman.*

Dr. R G. JENNINGS, Little Rock, Ark., *Secretary.*

Ophthalmology, Otology, and Laryngology :

Dr. DUDLEY S. REYNOLDS, Louisville, Ky., *Chairman.*

Dr. SWAN M. BURNETT, Washington, D. C., *Secretary.*

Deseases of Children :

Dr. A. JACOBI, 110 W. 34th St., New York, *Chairman.*

Dr. T. M. ROTCH, 77 Marlborough St., Boston, Mass., *Secretary.*

A member desiring to read a paper before any Section should forward the paper, or its *title* and *length*, (not to exceed twenty minutes in reading) to Chairman of the Committee of Arrangements at least one month before the meeting.—*By-Laws.*

Committee of Arrangements.—Dr. F. D. CUNNINGHAM, Richmond, Va., Chairman.

Amendment to the By-Laws offered by Dr. J. M. Keller, Ark.: In the election of Officers and the appointments of committees by this Association and its President, they shall be confined to members and delegates present at the meeting, except in the Committees of Arrangements, Climatology, and Credentials.

W. B. ATKINSON,
Permanent Secretary.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY. Condition of Large Arteries after Ligature under Antiseptic and Non-antiseptic Measures. Axillary Aneurism treated by Antiseptic Ligature of third part of Subclavian Artery; Partial Restoration of Lumen of Vessel.

The ordinary meeting of this Society was held on the 8th inst., J. E. Erichsen, Esq., F.R.S., President, in the chair. Two papers illustrative of the inefficiency of the catgut ligature to produce permanent occlusion of arteries tied in their continuity were read, the one being contributed by Mr. Treves, and the other by Mr. M'Carthy. The main contention was that under antiseptics the changes around the vessels are too slight and temporary to aid in the occluding process.

A paper was read on "A Case illustrating the Condition of Large Arteries after Ligature under Antiseptic and Non-antiseptic Measures," by Mr. Frederick Treves, of which the following is an abstract: The specimens upon which the paper is founded consists—together with other parts—of the right carotid and subclavian arteries from a man, aged forty-seven, in whom those vessels had been ligatured for innominate aneurism. The patient gave a history of previous good health, and no definite date for the commencement of the local symptoms. A small aneurism of the innominate artery was diagnosed and ligature of its two branches resolved upon. On June 30th, 1880, the right carotid was ligatured above the omohyoid by Mr. James Adams, under whose care the patient was. The operation was performed under antiseptic precautions without hindrance or difficulty of any kind, a stout catgut ligature was used, and tied in a double and then a single hitch. The wound healed rapidly by first intention without the formation of a drop of pus, and in twelve days the antiseptic dressings were discontinued. After the operation the aneurism, although it did not diminish, ceased to increase. On July 21st, 1880, Mr. Treves ligatured the third part of the subclavian, the operation was also performed antiseptically, and the vessel was readily found; a stout catgut ligature was used and was tied in two simple hitches. During the night after the operation the patient loosened the antiseptic dressings and exposed the wound. On the evening of the next day he had a chill, the temperature rose to 101·6°, and the edges of the wound were red and swollen. The wounds began to suppurate very freely; the stitches had to be removed to allow of the freer discharge of pus, and in thirty-six days the incision was almost healed, having closed up from the bottom. The carotid incision may fairly be regarded as a type of healing under antiseptic measures, and the subclavian incision as an open suppurating wound. After the subclavian was tied the aneurism improved greatly, all the previous symptoms of discomfort gradually disappeared, and the man was discharged thirty-six days after the operation with the tumour apparently cured, or at least greatly benefitted. He returned, however, on October 14th, 1880, complaining of severe pain in the back, of cough and of general feebleness and was readmitted after a slight attack of hæmoptysis the patient died suddenly, two days after admission. At the time of death, therefore, 108 days had elapsed since the carotid was ligatured, and eighty-seven days since subclavian operation. Death was found to be due to the rupture of an aneurism of the thoracic aorta; this had produced great destruction of some of the dorsal vertebræ. The great vessels were examined *in situ*. A small aneurism about the size of a Spanish chestnut was found connected with the innominate artery at its commencement; its sac was almost filled with laminated fibrin, leaving only a cavity about the size of a horse-bean in the centre of the tumour, and that communicated with the vessel. The brachio-cephalic vessel was quite patent, as were also the first portions at least of its two branches. In the region of the carotid operation the restoration of the parts to their normal condition was remarkable, the skin scar was slight and had formed no adhesion to the parts beneath, no trace of wound could be detected in the carotid sheath, no adhesions had formed between the artery and the vein, and every trace of the ligature had disappeared. No constriction could be seen in the vessel, and its external outline was unaltered and the seat of ligature indicated only by a faint transverse bluish mark on the vessel, due apparently to the thinness of the arterial coats in that situation. The vessel was found to be patent, but to be narrowed at the seat of ligature by a kind of perforated diaphragm or a miniature pylorus, leaving a central aperture about a line and a half in diameter. The diaphragm was formed by the incurvings of the ruptured ends of the middle coat, and as the external coat retained unaltered the external outline of the vessel, a minute triangular interval was thus formed, having its base represented only by the isolated external coat, and indicated by the bluish line, and its apex by the margin of the diaphragm, where the two cut ends of the middle coat met. As the two portions of the middle coat were only united to one another by the scantiest of connective tissues, the artery was very weak at the seat of ligature, and allowed of considerable angular bendings. The third part of the subclavian artery was found embedded in a mass of very firm inflammatory material, and was occluded for three-quarters of an inch, and entirely obliterated for half an inch. No trace of the ligature could be detected; the subclavian vein was patent. The aorta was very atheromatous, and the summit of its arch calcareous; the aperture leading from the aorta to the left carotid was extremely small, and that vessel was found to be occluded, save for a minute channel, through which air could only with some difficulty be forced. This unsuspected closure of the left carotid was evidently present at the time of the patient's admission, and much embarrassed the the early diagnosis; for when the patient came under notice it was observed that the left temporal pulse was much feebler than the right, that the aneurismal bruit (most clearly marked, over the innominate tumour) was more distinct in the left than in the right carotid, and that in the left vessel a thrill could be felt not noticeable in the right. These symptoms aroused strong suspicions of aneurism of the aortic arch, and are explained by the almost solid condition of the left carotid. As an operation for closing a blood vessel the carotid operation must be considered to have failed, and the reasons of that failure are matters of great importance. In reviewing the subject Mr. Treves deals in detail with the comparative physiological condition of the two vessels at the time of ligature, and urges that in this respect the condition of the subclavian artery at the time of ligature was actually less favorable than was that of the carotid when subjected to operation. In the details of the two operations and in the health and general surroundings of the patient, no differences are apparent that couid account for the differences in result. The conclusion, therefore, would appear to follow that the failure of the carotid ligature was due to the antiseptic measures adopted. It would appear that these measures might almost err on the side of perfection, by producing too ready and too complete a return of the parts to their condition previous to disturbance. Anatomically the healing of the wound was perfect, but would seem to have been too perfect for surgical purposes. A little so-called reaction in the wonnd, and a little of that firm inflammatory material almost too bountifully supplied about the subclavian incision, would probably have effected the permanent closure of artery. The comparative risks, however, attending the healing of the two wounds are to be considered. The question remains as to whether, for some surgical purposes, the perfect healing aimed at by the supporters of the antiseptic treatment is desirable or successful.

The following is an abstract of the paper on "Aneurism of the Axillary Artery, probably ruptured; treated by Antiseptic Ligature of third part of Subclavian Artery; Partial Restoration of Lumen of Vessel," by Mr. Jeremiah M'Carthy. F. G——, aged fifty-one, a sailor, was admitted into the London Hospital, September 7th, 1880. In 1879 he had been under the care of Mr. James Adams, for diffused aneurism of right popliteal artery, with the result of cessation of bruit and pulsation in the aneurism after eight hours' digital compression of the femoral artery. Five days later gangrene necessitated amputation above the knee. The wound had healed well, and the man was discharged cured in November, 1879. Ten days prior to his second admission he felt pain in the left axilla, which recurred on September 6th with great intensity, and a swelling was observed in front of the left shoulder. There was a pulsating tumour immediately below the clavicle, which stretched the pectoral muscles, so that the man sat with his body bent forward. A loud bruit was heard over the swelling, and its pulsations were synchronous with those at the left wrist. It was evident that a small axillary aneurism had suddenly ruptured. The subclavian artery was at once ligatured antiseptically with a catgut ligature, arresting pulsation in the tumour and left wrist. In four days the tumour and the œdema had almost disappeared, and the wound healed by the eleventh day, when slight pulsation could be detected in the left radial. On the twenty-first day the patient complained of severe pain in the shoulder, and examination was made for its cause. A harsh bruit was heard below the inner third of the clavicle, but none in the consolidated mass close to the shoulder. A hypodermic injection relieved the pain. On the forty-second day the tumour was spreading towards the shoulder, and ice was tried externally and iodide of potassium internally; and on the forty-sixth day, on the supposition of the subclavian artery having become permeable, an examination was made, but no pulsation could be detected in the subclavian beyond the ligature. On the fifty-seventh day the arm became œdematous, the pulse at the wrist no longer perceptible, and the tumour steadily enlarging. On the sixty-second day the arm became of a dusky-red color, some bullæ formed, and the tumour was obviously about to burst in the axilla. On the sixty-fourth day there was oozing of blood from the axilla, and Mr. M'Carthy amputated at the shoulder-joint. The pectoral muscles and parts of the axillary and brachial arteries were indistinguishable in the pultaceous mass, composed of old and recent blood-clots. The remains of the axillary aneurism could be seen with three large vessels opening into it, which, with five smaller vessels, were then tied. The man died one hour and a half afterwards. The author gave a full description of the post-mortem appearances of the subclavian artery and of the microscopic examination of its coats, which were much thickened at the seat of ligature, but there were no traces of the tunica intima having been completely divided, though in the media some of the elastic fibres had evidently been ruptured. The tunica adventitia was much thickened, and in it were imbedded the remains of the ligature surrounded by giant cells. With regard to the question how the artery became pervious, the author suggested that the catgut ligature applied with effectual antiseptic precautions to an artery in its continuity does not do sufficient injury to ensure the permanent closure of the vessel.

The president said the papers were of great value in the light they threw upon a subject of which so little was known—viz., the action of the catgut ligature upon the vessel when this is tied in its continuity. History repeats itself; for two generations ago it was probable that the efficacy of catgut and other animal ligatures was discussed at that society. At the beginning of this century such ligatures were largely used; the ends cut short, and the wounds closed over the ligatures. Astley Cooper had a case where healing took place in four days. It would be interesting to know why the surgeons in those days abandoned these ligatures, for which such great expectations were raised. Probably it was because they were not found to be so trustworthy as the silk and hempen ligatures, which again came into vogue. At the present day, although catgut is specially prepared and the application of the ligature aided by modern science, it was remarkable that facts were pointing to the same conclusion as that formerly arrived at. That in each of the cases recorded there should have been this imperfect occlusion or reopening of the vessel, and formation of a sort of perforated diaphragm, was remarkable; it was a condition altogether unknown in his own experience of the ordinary ligature. Mr. Morrant Baker asked why the author attributed the conditions found in the arteries to the mode of healing under antiseptics, rather than to the more reasonable fact that the ligatures had yielded after a certain time. Mr. Barwell said that the formation of a sort of diaphragm in an artery after ligature was quite new to him. In Mr. Treves's case no mention had been made of any internal clot above and below the seat of ligature (in the carotid), which used to be regarded as the chief protection against hæmorrhage. Could it be supposed that the antiseptic treatment prevented the formation of the clot, or the rupture of the inner coat, which determined such clotting. He suggested that a thin layer of fibrin might conceal the ruptured intima and convey the idea that this membrane had remained entire. Several instances had been recorded at the Clinical Society of the unreliability of catgut, which is liable to yield or to be absorbed too quickly; and this was a grave objection to its use. But if in the case the carotid had really been impervious for eighteen days, surely that was time enough for clotting to take place. Could one go so far as to say that the absence of an inflence outside the vessel prevented clotting within it? He was surprised that ligature of the carotid should have been followed by increase in the force of the radial pulse, and more surprised at the increase of the opposite radial pulse after ligature of the subclavian in Mr. M'Carthy's case. The use of catgut, doeskin, &c., was abandoned in old days because of the formation of abscesses around the ligatures. Although Astley Cooper's first case did well, his second case was followed by an abscess attributed to the ligature. Mr. Hulke had twice tied the common femoral with catgut obtained from Edinburgh. The wound in each case did not heal by first intention, but a small sinus was left, causing much anxiety for some time; and it was his belief that if he had used the ordinary ligature he would have been spared that anxiety. He believed from the careful descriptions given that in neither of the cases recorded was the inner coat cut through; and if the inner coat were not divided, no clotting would ensue. However, we live now in revolutionary days, for we are told now that the clot is an accidental factor in the occlusion, which is said to be produced by the union of the opposed surfaces of granulations formed from the proliferating endothelium of the intima; and that the clot comes afterwards to strengthen the union. Mr. Gant admitted that Mr. Treve's case showed that the open healing of the wound aided in the closure of the subclavian artery, but did not think the two operations comparable; that on the carotid being a simple incision, that required for ligature of the subclavian being a deep almost lacerated wound, where antiseptics were more likely to fail. Dr. B. O'Connor said that ten or twelve years ago when dresser to Mr. Lister at Edinburgh, it was impressed on him that freshly prepared catgut was certain to slip when tied in a knot after soaking a short time in serum; and in his recent address Mr. Lister had again forcibly pointed this out. Dr. J. Harley also pointed out that catgut by absorbing moisture must yield to pressure after a time unless most firmly applied. Mr. T. Smith said the cases were very valuable for confirming, if any further confirmation were needed, the untrustworthiness of carbolised catgut as a ligature for arteries in their continuity; and they supplied evidence as to the manner in which this takes places. He agreed with Mr. Baker that the whole failure could be explained by the ligature not holding long enough. He could not doubt that if they had not yielded the coats would have been completely divided, and clotting taken place. Ever since he had a case where, in consequence of the failure of a catgut ligature (given him by Mr. Lister,) followed by an aneurism at the seat of ligation, he had been in the habit of applying two such ligatures to an artery in continuity, and dividing the vessel between them. For the ligature can be trusted to severed arteries (as in amputation), but not to arteries, where continuity remained. He had followed this plan for the brachial and femoral arteries, and had no trouble from secondary hæmorrhage. He could not believe that any process to which the catgut was submitted would make it a safe ligature. It was not by nature ever intended to resist tension in the longitudinal direction, and he feared it was vain labor to attempt to alter its nature. More fitting material might be found in tendons, which naturally resist tension; and he had been informed that kangaroo tendons (of which he understood some were in use in St. George's Hospital), were much employed in Melbourne and found to be thoroughly reliable. Mr. Hulke explained that in speaking of the clot being only of secondary importance he was quoting the doctrines laid down in the ninth edition of Bilroth's work, and not his own views. Dr. Gilbert Smith asked whether the catgut ligature was likely to divide the inner coat, and whether such division was necessary or not to occlusion. The president said that was the point on which James, of Philadelphia, tried to contest Jones's view that the inner coat must be divided, and the former urged that animal ligatures did not divide the internal coat. Mr. Barwell had made many experiments which convinced him that it was impossible to tie an artery with a round ligature without dividing the internal coat. Mr. Treves, in reply, said that he presumed loosening of the ligature might occur, but his point was that if there had been any inflammatory exudation around the vessel it would tend to keep the ligature applied; and in an antiseptic wound no such barrier occurred. There was absolutely no clot found in the vessel. The antiseptic failed in the case of the subclavian, because the patient had displaced the dressings. The inner coat appeared to have been divided and then reunited; there was no doubt that the middle coat had been severed. The division of the internal coat depended simply on the amount of force employed in tying the vessels. Mr. M'Carthy, in reply, thought too much stress had been laid on the mechanical action of the ligature, and that the reopening of the vessel was due to changes in walls rather than the ligatures, which in his case had certainly not given way at the knot. The increased pulsation in the opposite radial was in accordance with physiological fact, and he related a case where such increased tension was observed by the sphygmograph to occur in the left radial artery to a certain extent when the right subclavian was tied, and to a much greater extent when this ligature was followed by ligature of the carotid, the case being one of innominate and aortic ameurism treated by ligature of these two vessels. If catgut were tied firmly enough it would divide the inner coat. In Mr. Adams' case, if this coat had been divided, a dissecting aneurism might have formed. There was microscopical evidence in his own case of proliferation of the intima; no clot was found, so that if it had formed it must have been swept away. The point of his case was that the changes in the adventitia did not proceed far enough, and the vessel yielded gradually to pressure, so that the channel was opened up again. Mr. Savory asked Mr. Treves if he had made any experiments or observations showing any difference between the healing of the wound in his case from that ordinarily known as healing by "first intention." If the process were the same, it did not alone explain why the vessel was not occluded. Mr. Treves said he had made no experiments.

The Society then adjourned.—*Lancet.*

NEW YORK ACADEMY OF MEDICINE.—At the last meeting of this Body, Dr. Fordyce Barker, President, in the chair, the evening was spent entirely in the discussion of the subject of leprosy and as this disease now both prevails and originates in the United States, the readers of this Journal will be much interested in learning the chief facts developed.

A highly instructive and interesting paper on this subject was read by Dr. H. G. Piffard. He describes the disease as a constitutional affection; the different forms are often blended, yet they are so manifested frequently as to give three distinct types, the anæsthetic, macular and tubercular. The symptoms described are similar to those given in most text-books. He does not think that the disease is contagious. East India officers do not so regard it. The cases in Bellevue Hospital did not propagate the disease. Yet it cannot be denied that the disease spreads in every country in which it appears or is introduced. It is believed that the disease though not contagious, (propagated by contact) is transmitted through the secretions and by the blood. It may be inherited.

The disease may be prevented from spreading by the old and well known method of isolation. This can only be done by governmental aid and authority, and chiefly by establishing lazarettos. There are now fifty well known cases of leprosy in the United States. The disease must be propagated by them. In the Sandwich Islands there were forty years age no cases, now there are ten in every hundred of the population.

In regard to treatment, the physician must relieve pain, try to remove the tubercles, to restore sensibility and to retard progress of the disease. The chief remedies known are cardol oil, gurgun balsam, chaulmoogra oil, chloride of barium, and strychnia. Dr. Piffard mentioned also the use of the *hoag-nan, hydrocotyle asiatica, anacardium occidentale, and callotropis gigantea.* The fever is treated by the use of quinine. Medicines do not generally control the disease. The diet is mild and unstimulating; all salt meats and fish being avoided, while fresh meats, vegetables, and fruits should be freely allowed.

The chief histologic changes are found in the spinal cord, The speaker introduced two cases for examination, one a woman, who had contracted the disease in Mexico, the other a young man from Bermuda.

Lepers are frequently introduced from China at San Francisco and are sent back when discovered. There should be every effort made to discover the number of cases in this country and to induce governmental aid in controlling the disease.

This paper a careful summary of which is given was very interesting and secured general and just attention. Drs. T. B. Pooley, G. H. Fox, L. D. Bulkley, W. J. Morton, Maxwell, and Sturgis made interesting comments upon it. Dr. Pooley has treated diseases of the eye caused or complicated by leprosy. Dr. Bulkley mentioned having treated nine cases; *two of them in persons who had never left this country, or been exposed to the disease,* Dr. Morton described cases seen in South Africa and in Paris. The best treatment observed by him was that by the use of static electricity.

A committee of three (Drs. H. G. Piffard, F. E. Sturgis, and G. H. Fox) was appointed to learn the extent to which the disease exists in this country.

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CORRESPONDENCE.

"Sit mihi fas scribere audita."

SALEM, VA., *Feb., 1881.*

Dear Doctor :

The following case seems to me worthy of record. I have never seen a similar one reported :

October 8th, 1877, I was sent for by Dr. H. to consult with him in an obstetrical case he was then attending. It was a breech presentation. Labor had progressed without difficulty until the trunk and limbs of the child had been expelled, but all the Dr.'s efforts had so far failed to extricate the head. The face was to the sacrum of the mother. I endeavored, by elevating its body over the mother's abdomen, at the same time depressing the chin by a finger in the rectum, to complete the labor, but failing, applied the forceps, which could not be made to lock. We then determined to perforate the cranium through the roof of the mouth, as no other point was accessible, but the perforator was dull and we found the undertaking more difficult than we had anticipated. I had noticed on my first examination that the child had a large fluctuating tumor at the inferior extremity of the spine (Spina Bifida). Both patient and attendants were now much fatigued. While resting for a time from my efforts to perforate the skull, I was again examining this tumor. Suddenly, simultaneously with a contraction of the uterus, it became tense. Almost instinctively, with the perforator which was in my hand I made an opening into the tumor; there was a gush of fluid, half a pint or more, and with one more pain the head was expelled.

The cause of the difficulty was now apparent. The child had hydrocephalus with spina bifida. The cranium was collapsed, but before the evacuation of the contained fluid it must have been of enormous size.

This case suggests a mode of procedure which may be adopted even when spina bifida is not present. If in a breech presentation there is much difficulty in delivering the head and there is reason to believe that the difficulty is caused by hydrocephalus, an incision into the membranes of the spinal cord would remove the fluid as well as one into the skull itself, and would be a much more simple procedure.

Some months ago I saw (*Med. and Surg. Reporter*) a report of a breech presentation in which the head, enlarged from hydrocephalus, was detained. Decapitation was practised and the perforator applied. Here, of course, the fluid must have been contained within the ventricles of the brain, or it would have escaped when the spinal cord was severed.

It would, I suppose, be impossible in any case, to determine whether the fluid was external to the brain or not, but an opening, as suggested, into the membranes of the cord, would in the first case obviate the necessity of perforating the cranium, which in such a condition will be found no easy matter.

Recently, I have attended the same woman in another confinement, which also presented some interesting features. I was only summoned, several hours after the birth of the child, to deliver the placenta, which I found closely adherent. The cord had been torn from its attachment. Finding it impossible to remove the whole, I took away as much as I could, about half. I gave her at once quinine, grs. v., every three hours, and used vaginal injections of carbolic acid two or three times a day, and intra-uterine injections of the same at my daily visits. Gave also salicylate of soda. Each day I endeavored to remove the mass, but failed. On the fourth day the placenta was expelled, and the patient recovered without further illness.

I have met with four other cases in which the placenta was firmly adherent; three of them, strange to say, in the same family, and two in the same patient. In each case, after my own efforts failed, I had the advice and assistance of other physicians. In one, after long continued efforts, the placenta was removed, but the woman died of septicæmia. In each of the other three the placenta was expelled spontaneously on the third or fourth day; one patient died, the others recovered with no illness whatever.

These cases, it seems to me, show that where the placenta is so closely adherent that it cannot be delivered without the desperate efforts which are often made, it is better to leave it for nature to expel, guarding the patient by appropriate remedies against the dangers of septicæmia.

I have been led to report the above cases from hearing an old physician say recently that no patient of his should die with a retained placenta; he would prefer that she should lose her life in his efforts to deliver it. It is no doubt a most distressing alternative we are called on to take, and we feel that if we leave a patient with her labor thus incomplete we may subject ourselves to reproach, but my experience, limited though it be, convinces me that life is often destroyed by the ill-advised force which is used. It is common to hear doctors say that they never saw a placenta so adherent that they could not remove it. They are more fortunate or more skillful than I, for in each of the cases mentioned above in which the placenta was left in the womb, I found it impossible to feel the placental margin—to determine where it ended, and the uterine surface began. In such a case what is to be gained by tearing it away piecemeal? Are we not sure to leave some portions still adhering? And would not the retention of a small portion be as dangerous as the retention of the whole mass? Would it not be *more* dangerous? For the whole placenta by its presence provokes the womb to constant expulsive efforts, while the small portion, being better tolerated, would probably be retained longer and thus expose the patient for a longer time to the dangers of blood-poisoning.

I hope I will not be understood as advocating inaction in this serious complication of labor. By no means. Let us use every reasonable effort to remove the placenta, but let us be careful not to push those efforts too far. Many lives have no doubt been sacrificed from a conviction on the part of the attendant that the placenta must be extracted *at all hazards*. May the report of these cases induce some to let their patients alone before they inflict injury on them.

Yours truly,
HENRY FROST, M.D.

FLATONIA, TEXAS,
February 26th, 1881.

DR. E. S. GAILLARD:

Dear Sir: In your book notices you mention a new edition of Prof. Flint's practice of medicine. In the third edition there seems to me to be a very slight mention of a disease, or sequel of disease, that is almost universal here. I allude to enlargement of the spleen. Hardly a day passes that our attention is not called to one or more cases. Sometimes, there having been no malarial fever so far as the patient is aware of. Instead of finding "enlargement of the spleen an occasional complication,"* we rarely find it absent after an attack of either remittent or intermittent fever. And there is almost always more or less pain, or at least a feeling of great discomfort. We find *here* slight enlargement of the spleen after the first week of typhoid fever. We do not find this mentioned in Flint's Practice. This may be owing to the typhoid fever being associated with malaria. Having suffered from this enlargement, the writer can safely say at times, during a period extending over two years, it was almost impossible for him to ride on horseback, such was the suffering induced by the motion of the horse. In the last ten years he has seen some cases that suffered constantly, although they only had occasional attacks of malarial fever. The treatment is, like fractures of the femur in surgery, almost an opprobrium to medicine. Those remedies that we, with others in this part of Texas have found most beneficial, are not mentioned in Flint's Practice, and we will briefly allude to them here. First in importance is, we believe, the iodide of manganese in one or two grain doses. The tinct. of iodine in ten drop doses ter die, until its constitutional effects are manifested is, we think, of great value. A large blister over the affected organ and repeated as rapidly as possible six or eight times, was of great benefit to the writer; but it is difficult to persuade patients to submit to more than one blister while able to go about and attend to their daily business. The muriate of ammonia in gr. v. doses is another valuable remedy. But with one or all of these, we often fail to find any reduction in the size of the organ or in the tenderness over its site. One remedy that we should have mentioned as often beneficial is oil of black pepper in combination with Prussiate of iron. I send you this article and you can use it if you see fit. We do not care to enter into any discussion in regard to the affection under consideration, but simply give you such opinions as an experience of fifteen years in a malarial country justify me in giving

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*Flint's Practice, 3d edition, page 857.

H. A. T.

Hot Springs, Ark.,
March 1st, 1881.

Dr. E. S. Gaillard:

In your February number you report cases of gall stones removed by the use of sweet oil, and ask *reports* of cases. The remedy *is not new* here. I met a patient of Dr. T. B. Buchan's (of this place) three years ago, who told me the Doctor had given him *one pint* of sweet oil to rid him of gall stones, and that he had passed full one pint of the stones, that it nearly vomited him to death before he began to purge. but that it had certainly relieved him. I determined on the first opportunity to try the remedy, and it has been my good fortune to meet three cases since, to all of whom I gave the olive oil in eight-ounce doses, and in each case it brought away the gall stones; in one case I had to repeat the dose. I met Dr. B—— this morning and asked him where he came across the treatment, he says it is an old eclectic remedy and that he has used it for over 30 years, so it is not so *new* after all.

Yours truly,
Jas. O. Fox, M.D.

E. S. Gaillard, Esq., M.D.,
426 W. 34th street, N. Y.

Dear Sir: Will you have the goodness to correct the mistake in the enclosed notice in your next number of the Medical Journal; it consists in mistaking the Rt. Hon. Lyon Playfair, C.B., M.P., now Deputy Speaker of the House of Commons, with his brother, Dr. William Playfair, who is the author of Playfair's midwifery. Mr. Playfair is continually called "Dr." by the English papers, even by the *Times*, but he is only LL.D., not M.D. The confusion with his brother is a source of considerable trouble to both of them.

I remain very respectfully,
Your obedient servant,
Sam'l. H. Russell

135 Beacon street, Boston Mass.

[*Communicated by the Surgeon General U. S. A.*]

WAR DEPARTMENT.

SURGEON GENERAL'S OFFICE.

Washington, Feb. 25, 1881.

It is with profound regret and a sense of loss, not only to his Corps, but to the medical profession, that the death of George Alexander Otis, Surgeon and Brevet Lieutenant Colonel, U. S. Army, is announced to the Medical Corps of the Army.

Born at Boston, Massachusetts, November 12th, 1830, he graduated with the degrees of A. B. and A. M. from Princeton College; entered the Medical Department of the University of Pennsylvania, and received his degree of M.D. from that Institution in 1850; visited Europe, and prosecuted his studies in London and Paris, and returning to this country he established himself at Springfield, Massachusetts; appointed Surgeon 27th Massachusetts Volunteers, September, 1861, he held this position until appointed Surgeon U. S. Volunteers, August 30th, 1864. After the close of the war he entered the Medical Corps, U. S. Army, as Assistant Surgeon, February 28th, 1866; became Captain and Assistant Surgeon, July 28th, 1866; Major and Surgeon, March 17th, 1880, having received the four brevets of Lieutenant Colonel of Volunteers, Captain, Major and Lieutentant Colonel U. S. Army, for meritorious services during the war. While Surgeon of the 27th Massachusetts Volunteers he served in Virginia, North and South Carolina, and was on special duty in charge of the Hospital Steamer "Cosmopolitan" in the Department of the South. Assigned to duty in this Office July 22d, 1864, he was Curator of the Army Medical Museum, and in charge of the Division of Surgical Records until his death.

He was before the late war editor of the *Richmond Medical Journal** for three years, member of the leading medical societies of America and corresponding member of various similar societies in Europe, and a contributor to prominent medical journals. Surgeon Otis, with his personal observations of the surgical collections abroad, brought indefatigable industry and untiring energy to the development of the surgical and anatomical collections of the Army Medical Museum, which he has made the most valuable of their kind in the world. The compilation of the Surgical Volumes of the Medical and Surgical History of the War has placed Surgeon Otis confessedly among the most prominent contributors to surgical history.

While on duty in this Office Surgeon Otis wrote for publication no less than ten reports on subjects connected with Military Surgery, etc.; among which are his most valuable and exhaustive reports on "Excision of the head of the femur for gunshot injury," and on Amputation at the hip-joint in military surgery." Of great culture, retentive memory, and with a remarkable facility of expression, he was, as a compiler and writer, conscientious in his analyses, giving his deductions from the facts before him with modesty, but decision. With such a record it is needless to speak of his zeal, his ambition or his devotion to his profession and especially to the reputation of the Corps of which he was so bright an ornament. While devoting himself to the preparation of the Third and last Surgical Volume (now more than half completed) of the Medical and Surgical History of the War, he died in this city February 23d, 1881. His untimely death will be deeply deplored, not only by the Medical Corps of the Army, but by the whole Medical Profession at home and abroad.

JOS. K. BARNES,
Surgeon General.

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MEDICAL CONFESSIONAL.

Peccavi.

LOUISVILLE, KY., Feb. 9, 1881.

Dr. E. S. Gaillard:

Three years ago, while practicing in

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*Error; it should be *Virginia and Maryland Medical Journal.*—ED.

Texas, I was called to see a boy seven years of age. Learned that the day before he had attempted to climb a rail fence, falling backward, the top rail falling striking him across the abdomen. He had fever, quick bounding pulse, furred and irritable tongue, with distressing and persistent vomiting. His abdomen was distended and sensitive to touch, particularly so over the sigmoid flexure of the bowel, in which region I found a hard, unyielding tumor, too painful for satisfactory manipulation. I was satisfied the blow from the falling timber had produced serious lesions in the abdominal cavity, of the exact character of which I was in doubt. I ordered bowels poulticed; gave opium and aconite. The following morning I found the symptoms of the day before aggravated. I injected the rectum with warm salt water, immediately after which he passed an enormous qnantity of plum seed, and my tumor was gone, followed by a rapid subsidence of all the symptoms upon which I had based my serious prognosis.

This is not my only *known* mistake in practice; of which more anon.

JAS. M. FREY.

NOTE.—Is it possible that the readers of this Journal make no blunders which they can confess, and so prevent others from committing the same mistakes? or is it that they are afraid to confess their errors? or, what is most probable, is it that being readers of this Journal they make no mistakes?—ED.

REVIEWS.

"Judex damnatur cum nocens absolvitur."

Food for the Invalid, the Convalescent, the Dyspeptic, and the Gouty. By J. MILNER FOTHERGILL, M.D., and H. C. WOOD, M.D. New York, Macmillan & Co. 1881.

This work is the result of the joint labors of Dr. H. C. Wood, the editor of the Philadelphia *Medical Times*, and of Dr. J. Milner Fothergill, its London correspondent, and one of the best writers in the profession. It is intended to a great extent for the laity and is filled with excellent dietetic receipts; there being over three hundred of them. One of the editors suggests that "the book may be useful to the physician who writes with pencil upon its pages such food as he he thinks *the individual patient owning the book* may with safety use." Now as the number of patients is immense, the suggestion thus made, if observed, would secure a sale unprecedented. It is, therefore, a very good suggestion—for the owners of the book.

The Philadelphia *Medical Times* uses, with originality, (so far as is known) and certainly with effect in regard to books, the term "pot-boilers, *i. e.*, medical treatises written for the laity, *for very practical purposes*." Does not this work stand in this class, and at the very head of it? It is essentially a pot-boiler. Even so, however, may the pot boil long and profitably; and may the resulting repasts bring abundant nutriment to sustain these excellent cooks in their future catering for the general and professional Public.

A Manual of Medical Jurisprudence. By ALFRED S. TAYLOR, M.D., F. R. S., F. R. C. S., etc. Eighth American Edition from the Tenth London Edition. Edited with additional Notes and References by JOHN J. REESE, M.D. With Illustrations on Wood. Henry C. Lea's Son & Co. Philadelphia. 1881.

It is a pleasure always to call the attention of the profession to such a work, for it is so entirely deserving not only of their attention, but of their absolute confidence. The work is so universally known that it would be as useless to commend it to physicians, as it would be to recommend the New Testament to the representatives of Christianity. It has long endured the ordeal of minute criticism, and has come from the fire like pure metal from the hands of the refiner; purified and proved.

The present edition (the eighth American) was completed just before the author was called to the final Court of Jurisprudence, and it should be welcomely remembered, by all American physicians, that his last labors were expended solely in preparing this "revision expressly for the benefit of his American brethren."

The additions made since the last edition was issued are quite numerous and the work has also been completely revised. The notes of former editors, Dr. Hartshorne and Judge Penrose are retained, and the present editor, Dr. John J. Reese, of Philadelphia, has by his own labors largely increased the value of the work. Dr. Reese has not only added to the material furnished by the author, but has drawn extensively and welcomely from his own abundant resources. Indeed it would be very unjust to omit the most specific testimony as to the extent of his labor, and the fidelity of his research. The work has through him been largely improved in professional value and literary adornment.

The present edition is published in several styles, but that in "half Russia" is recommended. The Publishers' labors are beyond criticism.

A Treatise on Albuminuria. By W. Howship Dickinson, M.D., Cantab, F.R.C.S.,etc. Second Edition. New York, William Wood & Co. 1881.

While much of the contents of this volume is to be found favorably analyzed and criticised in Roberts' great work on Renal and Urinary Diseases; while it can not in relation to the subject of albuminuria be accepted as a substitute for that most practical and instructive volume; and while it is inferior to it in the absence of the wider field and greater scope presented; it is yet a genuine pleasure to welcome it to the list of great authorities upon the subject presented. No where, in English medical literature certainly, can the student, old or young, obtain such beautiful analyses and instructive descriptions of pathological facts; or such concise and practical directions in regard to the important subjects of prognosis and treatment. The work is unreservedly commended and there is no medical library, however large and complete, which would not, by the addition of this volume, have its value most undoubtedly and welcomely increased.

The volume is liberally illustrated with excellent "wood cuts" and with very fair water-chromo lithographs; and while these last, from insurmountable mechanical difficulties, and unavoidable chromatic errors, can never be entirely satisfactory to the accurate pathologist, they serve to give fairly reliable impressions which would otherwise be beyond the powers of an author.

The Publishers have issued the volume fairly, but not as elegantly as the contents deserve, and they are to be commended for omitting their "price catalogue" which has so generally appeared in their publications.

This volume unquestionably ranks far above those so far issued, by the publishers, for their "Library of Standard Authors" and for this they will justly receive the thanks and support of the medical Public.

It is a pleasure to learn that when

they issue an American Reprint of a Foreign work, the author is duly remunerated.

Differential Diagnosis. A Manual of the Comparative Semeiology of the More Important Diseases. By F. DE HAVILLAND HALL, M.D., Assistant Physician to the Westminster Hospital, London. Second American Edition. D. G. Brinton, Publisher, Philadelphia, Pa. 1881.

While this book has never been reveiwed before in this journal, the first edition escaping attention, it has been so generally and favorably noticed by the American Medical Press, as to be quite familiar to the Public.

Works on diagnosis are always so practical, as to be particularly desirable, but those on differential diagnosis are even more valuable. The reader does not desire an analytical review of such a volume; preferring if the work be a good one, only to be so assured, and then to read it closely, and form his own opinions as to its value as a clinical guide. Assuming this to be the desire of those who have not seen this volume, the writer can only say that he has not seen a work of more practical and genuine value to the general practitioner; and that no one can fail to value it as a useful adviser and reliable companion. It is fairly issued, and will, it is hoped, meet with the support it so justly merits.

Hand Book for Coroners; Containing a Digest of all the Laws in the Thirty-eight States of the Union. Together with a Historical Resumé from the Earliest Period to the Present Time. A Guide to Physicians in Post Mortem Examination. By JOHN G. LEE, M.D., Philadelphia, Pa. 1881.

So far as is known this work is unique; there are none either in design or scope in any manner similar to it. Many may say "it is only a compilation," but a good compilation, it should be remembered, is a proof of extensive knowledge and scholarly research. When good, it is as good in actual value, and as creditable in its scholarly attributes, as a work of absolute originality; often far more valuable. This book is then a compilation, but it is an honest and extensive compilation, and will receive just support. The title page, given above, is so comprehensive, as to render any description of the scope of the work unnecessary.

It is in its mechanical preparation, open to criticism, but the paper is fair enough and the typography clear and good. The book will unquestionably do good service.

Drugs that Enslave. The Opium, Morphine, Chloral and Hashisch Habits. By H. H. KANE, M. D., New York City. Presley Blakiston, Philadelphia. 1881.

There is no physician who is not deeply interested and practically concerned in all absolute testimony and honest research in regard to the abuses of the drugs considered in this volume. It is a most interesting and instructive exhibit of facts and one that cannot fail to secure general attention and great popularity. It costs but $1.50 and for this reason and for its intrinsic value it should be generally purchased.

The volume presents many cases in detail, with minute symptomatology and treatment, and the profession cannot fail to be benefitted by its publication. It is neatly issued.

Rocky Mountain Health Resorts. An Analytical Study of High Altitudes in Relation to the Arrest of Chronic Pulmonary Disease. By

CH. DENISON, A.M., M.D., Denver, Colorado. Houghton, Osgood & Co., Boston. 1881.

There is no part of the study of chronic pulmonary diseases which justly receives more attention than the therapeutic value of latitudes and elevations in the arrest and treatment of these affections. The periodical literature of the day has manifested this, by the embodiment of many valuable papers both in this country and in Europe. It is difficult, however, to remember when and where such papers are published, and, as a result, they are almost lost for the purposes of reference and study. There is no work known which gives so interestingly and succinctly all of the facts desired in this connection, as the one whose second edition, it is a pleasing office to note at the present time. Apart from its professional and generally scientific value, the work will be read, and and should be read, by all of the laity who value literary excellence and beautiful descriptions of novel and classic scenery. It is to be hoped that the accomplished author will reap an abundant pecuniary as well as professional reward for his valued and most excellent labors.

A Manual for the Practice of Surgery. By THOMAS BRYANT, F. R. C. S., Philadelphia. Surgeon to and Lecturer on Surgery at Guy's Hospital, London, England. Third American from third English edition, edited and enlarged for the use of the American student and practitioner by John B. Roberts, A. M. M. D., Phliadelphia, 235 illustrations. Philadelphia: Henry C. Lea's Son & Co. 1881.

This is the third edition of this work both in this country and in England. The English edition from which this is printed has been carefully revised and rewritten; almost every chapter has received additions and nearly one hundred new cuts are introduced. The English edition is in two volumes; the American, in one. This change is a very welcome one, for it is objectionable to have such works in more than one volume. The labors of the American editor, Dr. John B. Roberts, have very much increased the value of the book. He has introduced many new illustrations and much new material not found in the English edition. He has written too with great conciseness which is a rare virtue in an American editor of an English work. His matter is by a device of his own easily distinguished from that of the author. His tribute to his preceptor, Dr. R. J. Levis, of Philadelphia, is very appropriate and beautiful, not only in the diction used, but in the commendable spirit which induced it.

This work is certainly a great one; in addition to its completeness as a work on general surgery, it is very valuable for its chapters on the eye and ear and even on dental surgery. It is especially excellent in its teachings in regard to ovarian tumors and on deformities. The first part of the work presents a very complete exposition of the elementary subjects of surgery, of tumors and the surgery of the cutaneous, nervous, digestive, circulatory and lymphatic systems. The most conspicuous material in the volume is that relating to the surgery of the genito-urinary, the muscular, respiratory and osseous systems, with a full exposition also of all the facts relating to gun-shot wounds and amputations. The index too is very complete.

If one could procure or wished only one surgery, this volume would certainly be selected. If he desired two, Erichsen's surgery would be added, and if he wished a third, Gross' surgery would justly be the work selected. As the great work of Gross is amply sufficient for the wants of any surgeon, the priority given to Erichsen, and, above all others, to this work of Bryant is no labored eulogy of the last volume, but a simple and just statement, of its demonstrable and pre-eminent merits.

The publishers have issued this volume very handsomely and all who purchase it are advised to select half Turkey morocco binding, as being beyond comparison the best.

The Heart and Its Functions. New York. D. APPLETON & Co., 1 Bond street. 1881.

This is one of the Health Primer series. Its contents are divided into sections as follows: Why we have a heart; the structure of the human heart; the function of the heart and how it is performed; the relation of the heart to the general system; and how to maintain the integrity of the heart's function. The name of the author of the little volume is not given. Its scope is very limited, and while unprofessional readers may perhaps be interested in it, there are few medical students who even in their "first course" are not acquainted with the facts given; and very many more not mentioned. As to the question forming the subject of the first part of the volume, "why we have a heart," it is difficult to answer exactly; perhaps there is no necessity for one, and we might even "get on better" without one, but unfortunately there is a prejudice on this subject, and for the present, at least, there are few persons who are independent or original enough to try and live without one. Morally, socially, æsthetically, and even sentimentally much might be said in reply to the question, but physically, physicians, who are anatomists and physiologists, would give a reply by no means flattering to the sense, or common sense, of the author. The little book costs but 40 cents, and if any juvenile doctor has "lost his heart," he may profitably give the volume to his Dulcinea to convince her of the folly of his attempting to live in such a condition. It can not be especially interesting to any others, and is therefore not recommended to that omnipresent individual, "the busy practitioner."

BOOKS AND PAMPHLETS RECEIVED.

Materia Medica and Thereapeutics of the Skin. By H. G. Piffard, A.M., M.D. Wm. Wood & Co. New York. 1881.

The Hygiene and Treatment of Catarrh. By H. F. Rumbold, M.D. St. Louis. 1881.

John Hunter and his Pupils. By S. D. Gross, M.D., LL.D., etc. Presley Blakiston. Philadelphia. 1881.

Sanitary and Statistical Report of the Surgeon General of the Navy for the year 1879. Washington. 1881.

Twelfth Annual Report of the Board of Directors of the New York Physicians' Mutual Aid Association. 1880.

Purposes of the Civil Service Reform Association.

Transactions of the Eleventh Annual Session of the Medical Society of Virginia. 1880.

Third Annual Report of the Board of Health, of Augusta, Ga. 1881.

Dr. Edward Jenner's Discovery of Vaccination. By E. L. B. Godfrey, M.D. Camden, N. J. 1881.

The Strong Galvanic Current in the Treatment of Sciatica. By V. P. Gibney, A.M., M.D. New York. 1880.

Erysipelas of the Larynx. By Wm. Porter, A.M., M.D. St. Louis, Mo. 1881.

Annual Announcement of the Philadelphia School of Anatomy. Philadelphia, Pa. 1881.

Annual Report of the Central Kentucky Lunatic Asylum. Anchorage, Ky.

The Heart and Its Functions. A

Health Primer. D. Appleton & Co. New York. 1881.

Transactions of the Medical Association of the State of Alabama. 1880.

Diseases of the Skin. Louis A. Duhring, M.D., Professor of Disease of the Skin in the Hospital of the University of Pennsylvania. J. B. Lippincott & Co. Philadelphia. 1881.

John Hunter and His Pupils. By S. D. Gross, M.D. Presley Blakiston Philadelphia. 1881.

Hand Book for Coroners. By John G. Lee, M.D., Coroner's Physician of the City and County of Philadelphia, Pa. 1881.

Syphilis and Marriage. Lectures delivered at the St. Louis Hospital, Paris. By Dr. Alfred Fournier. New York. D. Appleton & Co. 1881. $2.

Drugs that Enslave. By H. H. Kane, M.D. New York city. Presley Blakiston. Philadelphia, Pa. 1881.

Purposes of the Civil Service Reform Association. 1880.

Fifty-sixth Annual Report of the New York Bible Society. 1880.

Transactions of the Medical Society of the State of W. Virginia. Wheeling. 1880.

Manhattan Eye and Ear Hospital Report. New York. 1880.

Protection of the Insane. By Geo. M. Beard, M.D. New York. 1880.

Tænia et Pelletierine. By Charles Tanret. Paris, France.

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TRANSLATIONS.

"Ubi mel ibi apes."

The Time for Ligature of the Cord and its Relations to Icterus in the New-born.

By M. C. Porak, M.D. From the *Revue Mensuelle de Medecine et Chirurgie.* January, 1881.

In reading the various treatises on midwifery, it is surprising to see how contradictory the opinions of authors are upon the question of when to cut and tie the umbilical cord. Among the modern obstetricians, some like Cazeaux, Chailly, Jorelin, Verrier, Penard, etc., advise the immediate or almost immediate ligature of the umbilical cord; others as Naegelé, Schroeder, Jacquemeir, Kleinwaechter, Stoltz, Tarnier, etc., think that the tardy ligature is preferable.

Denman, Stoltz, Tarnier, acknowledge that the blood of the infant is more benefited by the tardy ligature of the cord than by its immediate ligature, but the exact amount of this benefit is not settled and this question has led to fresh clinical and experimental researches. Tarnier in conjunction with one of his assistants Budin engaged in an attempt to collect and estimate the amount of blood which flowed from the cord when cut for ligation whether immediately or tardily. From the researches of Budin, it appears that the child may benefit by about three ounces of blood when in place of practicing immediate ligature of the cord, it be tied about four minutes after the cessation of the arterial pulsations in the funis. If it be admitted that the quanity of blood containad in a child's body be equivalent to one thirteenth its weight, it is obvious that the total amount of blood in a child is about nine ounces and that the tardy ligature of the cord adds one third more blood to the quantity already contained in the vessels of the child. To render this result more evident, Budin* remarks that a new-born child the umbilical cord of which has been tied immediately after birth finds itself relatively to a child whose umbilical cord has been tardily ligated, in the same situation that an adult is who weighing one hundred and forty pounds has lost ten by bleeding. Budin concludes that the section and ligature of the umbilical cord should only be done about one or two minutes after the cessation of arterial pulsation. If in place of tying the cord immediately after birth it be tied from two to seven minutes, generally two minutes after birth, the umbilical arteries continuing to beat it is easily seen that about two ounces of blood otherwise left in the placenta are preserved for the child. In the second part of his memoire Budin energetically condemns the practice of bleeding the umbilical cord when the child is found to be asphyxiated. The child then not only fails to receive the three ounces of blood left in the maternal veins but endures a new loss of blood amounting, in proportion to the same loss in the adult, to eighty to a hundred ounces. The results of Budin were not received without debate by the Société de biologie where they were read and it was claimed in earnest debate that the sole means of demonstrating the utility of the practice advised by Dr. Budin lay in the observation of the health of the children. There was a ready means of finding the state of health of the child which consisted in weighing the children and ascertaining if those whose umbilical cord was tied immediately weighed less than those in whom the umbilical cord was tied late. The results of Budin were the subject of general discussion and the question of the early or late ligature of the umbilical cord became the order of the day. Soon after the appearance of Budin's memoir, Kohly* in his inaugural thesis endeavored to demonstrate by means of weight the influence of tardy ligature on the health of the new-born infant and thus filled the hiatus just indicated in Budin's memoir. His observations are not very numerous and not very decisive but he decides very clearly nevertheless in favor of the tardy ligature. As far as concerns myself I do not hesitate to admit that the perusal of Budin's memoire convinced me of the truth of his propositions and when I became an interne at the lying in department of the Cochin hospital, I attempted to induce the midwives to very actively engage in the tardy ligature of the umbilical cord. Mademoiselle Pepin responded with the best grace to this invitation but the other midwife absolutely refused to accept the innovation. I was then in spite of myself obliged in a measure to see the degree of difference which existed between the new-born in whom the umbilical cord had or had not been ligated and I was persuaded after some months of rather superficial observation that the new-born whose umbilical cord had been tardily ligated did not enjoy better health than the others. I resolved to study the question more thoroughly, observing and weighing each child carefully, but at the Cochin hospital there are but two or three births a day and it was impossible for me to unite a large number of absolute personal investigations, cases in which I had officiated at the delivery, weighed the child and tied, or not tied the cord. I was therefore fortunate in obtaining the intelligent and attentive aid of Mademoiselle Pepin, who not only ligated the cord in the manner already indicated, but volunteered to watch the first weighing and register it carefully. As to the other weighing I did them all myself assisted by the externes of the service. I generally commenced weighing the morning after birth thus controlling the first weight. I have continued these weighings sometimes every day, but, most frequently every two days, registering carecarefully all changes in the health of the child. That this method of weighing is not destitute of defects I will not attempt to deny. What controls more than any thing else the conditions which damage or improve the general health of the child is the milk, and this I have looked after very carefully. I did not take any account of the cases in which the supply of milk was not insufficient. There are numerous other conditions which may so modify the sanitary state of the child that the conclusions of a work such as I have undertaken are only only of value when they rest on a great number of observations. I note with care among all the troubles presented by the child the icterus with which it may be attacked, and I do consider as icterus the clearly defined, widely extended, yellow coloration of the body. I have collected during the month of June and July, eighty-five cases in which ligation of the umbilical cord was made immediately after birth and eighty cases also where the cord has has been ligated tardily.

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* When should the cord be ligated. Comptes Rendu de la Société de Bioiogie, 1876.

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* Dr. Kohly. These de Paris, 1876.

The results of my observation show that the new-born infants whose umbilical cord are tied tardily lose more weight than those in which the cord is tied immediately, and further that the tardily ligated child is more subject to icterus than the others.

Nevertheless there is slipped into my calculations an element of error. The children are generally weighed covered up in the bed in which they are carried around and the weighing is generally done after the washing. The beds generally not having the same weight there enters from this cause a source of quite considerable error into my calculations. Further the distinction of an intense and widely extended icterus is a bogus one and I might be easily accused of abandoning myself to a preconceived idea and unintentionally allowing the balance to rest more on one side than another ; in short the numerous objections that might be made to this series of observations seriously impair their value, nevertheless they are not without some value.

The weights indicated latterly belong to all the new-born and they were weighed without the bed.

The frequency of icterus in cases where the new-born infant has received a greater quantity of blood is a new and conclusive proof of the hæmatic origin of the icterus of the new-born. I united these observations under the following title: *Considerations on the Icterus of the New-born and the Time when the Umbilical Cord should be Ligated;* and made this the subject of my memoire for the examination of the internes.

I was not the only person whom Budin's memoire led to study this question, as very recently have I learned of the results of Schücking,* lately of those of Hélot† and of a note published by Zweifel‡ on this subject.

Schücking and Zweifel show themselves very favorable to the opinions of Budin and modify his conclusions but slightly. Hélot fears without giving his reasons for this apprehension that the physiological limits are exceeded in ligating as recommended by Budin and thinks that the perfect establishment of the respiration for some seconds should be ascertained before ligating the cord.

I have profited largely in the exposé which follows by the researches of these authors and as I have already explained it is my intention in this article to deal not only with the importance of the method in which the umbilical cord is tied more or less tardily but also to deal with the relations of the mode of ligature to the production of icterus of the new-born. My results range themselves under three heads.

I. Simple icterus of the new-born considered from a prognostic point of view.

II. The time when the umbilical cord should be ligated.

III. The pathogeny of icterus of the new-born.

I.—*Simple icterus of the new-born considered from a prognostic point of view.* Icterus of the new-born is perhaps the most commonly observed pathological states of the human species. So common indeed is it that certain authors have regarded it as a physiological condition. In spite of the numerous researches undertaken on this subject our knowledge of it is not yet very extensive. Even the definition of the condition is exceedingly obscure. I regard as icterus *all yellowish discoloration of the skin coming on spontaneously*, consequently eliminating all discoloration due to ecchymosis, it being very evident that following a prolonged labor in cases of presentations of the face, buttocks, or shoulder, sanguinary effusion is likely to result in the presenting part. And these effusions present during the period of their dissappearance diverse coloration which are conducted by a stage of yellow discoloration. Kehre* who has published a very interesting work on icterus of the new-born calls attention to a yellow which on the sclerotic conjunctiva consequent on an effusion of blood is frequently observed at this point. This yellow tint characterised by its semi lunar form, its situation on the conjunctival fold its shading from the periphery to the centre and its different coloration from the neighboring parts. It is important that this error should be recognized in order not to charge to icterus the hue of the conjunctiva due to ecchymosis. Kehrer studied six hundred and ninety new-born children above all from the stand point of the etiology of the icterus observed during the first period of infancy. He however only regarded as icterus such children as had the conjunctiva affected. This distinction I do not consider a valid one and I shall in consequence make much less use of Kehrer's labors than I could desire. When the child enters the world, it is at first pale but at the end of a certain time, under the influence of the air, the cutaneous capillaries rapidly become engorged and it assumes a more or less marked coloration. Some children are rose colored, others have an intense red color which they keep for several days. This color is so pronounced in certain cases that the old authors regarded it as of an erysipelatoid or inflammatory nature. This coloration ordinarily disappears little by little and, by the end of the fifth or seventh day, many having at first various shades fade into about the same hue. In pale or rose colored children the yellow tint is easily recognized. In red colored children when the yellow tint is very pronounced, the original hue is not so clear and is of rather an orange shade. When the yellow only tinges the other color, its recognition is by no means easy. The best means is to compress the skin at one point causing the blood to disappear and showing what color the skin is at bottom. There are cases however where even this test will not avail. Yellowness is said by many works on legal medicine to be present in all the new-born but I remember very many children of a decided paleness. There are cases where the color is so slight as to escape notice.

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* Schücking: *Zur Physiologie der Nachgeburt.* (*Berliner Klineoshe, Wochenschrift,* No. 1 and 2, 1877.)

† Hélot: *Etude de physiologie experimentale Sur la ligature du cordon* (*Union Medicale,* De la Seine.

‡ *Zweifel Centralblatt für Gynaekologie.*

Icterus varies very considerably in its intensity of hue, extension and duration and it is necessary to classify it by three degrees.

In its weakest degree, *the first*, the yellow color is found only on the chest, shoulders, and face. It does not commence at these different points at the same time. It ordinarily makes it début on the face although it sometimes appears first on the chest. In this degree the general tinge is but slight the conjunctivæ are white and the coloration of brief duration lasting from the end of the first day to almost the fourth. In its second degree icterus is more extensive, the abdomen and sometimes the upper part of the extremities being yellow. The hands and feet and more commonly the legs and forearms are not. When the mouth of the child is open there are obser-vedon its palatine arch two lateral patches of a pale color. In the icterus of the second degree these are yellowish. I have observed several cases in which with an extended icterus the sclerotic remained white. These cases of icterus of the second degree, where the sclerotics remain white, differ from the cases of the first degree, in the fact that the abnormal coloration is more extensive and exists not only on the face and chest but also on the abdomen and sometimes on the up part of the upper or lower extremities, and in the second degree the coloration is more sharply defined than in the first. Icterus of the second degree comes on rapidly, lasts from three to six days and has completely disappeared by the seventh.

Icterus of the third degree is generalised and is distinguished from the second in the fact that the hands and feet are yellowish, but it is often difficult to maket his

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[*] Kehrer: *Studien über deu Icterus Neo Natorum.* (*Œsteriche Jahrbücher für Paediatrie*, 1871.)

distinction as the icteric hue is always less in those parts than in the rest of the body, the feet and hands being often red, it requires the before mentioned test to determine if they be icteric. The nails are so red at times that it is difficult to determine whether they are affected by the yellow tinge. Underwood * claims that even in the most extended and pronounced icterus the anils are not affected. The coloration is more marked in this degree than the preceding but it presents two distinct varieties. In the first variety the coloration although more marked than the preceding retains the same tint. The second variety has a more intense at times green tint. Bile-pigments are found in the urine in the second variety. These varieties justify to some extent, Gubler's opinion that there is an icterus of blood and icterus of bile origin. These varieties appear early and last till about the ninth day. The prognostic value of these degrees varies as will be seen later. I have observed 248 children during 1877 with the following results:

		Per Cent.
Infants not Jaundiced,	50	20.16 per 100
" Jaundice 1st degree,	34	13.71 " 100
" " 2d "	91	36.69 " 100
" " 3d "	73	19.50 " 100
	248	

Icterus is, therefore, common among the new-born and icterus of the first degree rather rare. I have attempted in vain to obtain a characteristic symptom of each degree. The digestive apparatus presents nothing peculiar. The fæces are exceedingly diversified, their color varies from the normal yellow, becoming green or not upon exposure to air, to a positive green; from a diarrhœic fluidity to absolute constipation. The expulsion of meconium offers nothing peculiar. The appetite of the child varies greatly. Palpation and percussion of the liver yields nothing peculiar. The circulatory apparatus does not present anything abnormal. I have endeavored to count the cardiac pulsations under circumstances when they were not easily influenced but have found nothing abnormal. Numerous eruptions were observable in the children but could not be traced to the icterus. Nor was there anything else notable about the skin. The urine of icteric new-born children presents many peculiarities and should be studied with great care. The urine ordinarily first expelled is very transparent, colorless as the purest water. The urine of the next day or of the second micturition is colored. The urine during the first few days is usually very sedimentary. This sediment ordinarily results from the tubular concretions to which Schlossberger and Virchow have given the name of urinary infarctions. The composition of these is very diverse, chiefly however, urate of soda. They might be studied with profit for crystals of hæmatoidine or fragments of pigment. I have found in at least one case traces of bile. Parrot and Robin* describe in the icteric urine: First yellow masses of acicular crystals resembling at first sight bilirubin crystals but differing in their reäction. Robin believes these consists chiefly of hæmaphsine. Second, hæmatoidin crystals and pigment clumps of apparently hæmatic origin, a fact the more interesting as hæmaturia properly so called is rare in the new-born. Third, urate of soda spheroid.

It should be remarked that Robin and Parrot have taken children of all ages and probably a special investigation of the first few days would be of interest. After the third, the urine is more abundant and different in character. In a healthy child the sediment disappears even if icterus exists and its urine becomes transparent and inodorous. In the icteric new-born no special coloration characterises the urine. In the great majority of cases this is to be found a layer of extreme thinness, of a red color. In some cases below this layer is to be found a thicker band of greyish color. I have observed three cases of the reäction characteristic of bile in the urine of the icteric new-born, but it is extremely rare. These three being the only ones out of one hundred and ninety-eight in which this reäction was found, showing that icterus of bilary origin is rare in the new-born. Albumen is of frequent occurrence in the new-born, but I believe it, like icterus of the first degree, is a pathological phenomenon of little importance.

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* Underwood Icteria or Infantile Jaundice, 1866.

* Dreybus-Brisac De l'ictere haæmapheique.

What is the prognostic value of simple icterus of the new-born. The following table when analyzed throws light on this subject:

GAINED IN WEIGHT.

15	Children	not Jaundice	5½ oz.	8th, 9th or 10th day
21	"	1st degree	5 1-3 oz.	" " " "
31	"	2d "	3 oz.	" " " "
21	"	3d "	2½ oz.	" " " "

LOST IN WEIGHT.

15	Children	no Jaundic	7¾ oz.	8th, 9th or 10th day.
7	"	1st degree	5 oz.	" " " "
27	"	2d "	5¾ oz.	" " " "
28	"	3d "	8½ oz.	" " " "

The children who gained most in eight, nine or ten days are those who are jaundiced. Then there come those slightly jaundiced, the difference between the two classes being but slight. Then gaining but slightly come those of the second and third degree. The classes of the second table range themselves as to the lesser degree of loss as follows: first, the children jaundiced to the first degree; second, those jaundiced to the second degree, then at a great distance the unjaundiced children and those jaundiced to the third degree. We see, therefore, that the more the icterus is pronounced, the smaller the gain or greater the loss the child in eight days. Icterus is, therefore, a symptom of the state of nutrition varying as the health, and the only conclusion we can make from these figures is that icterus of the first degree does not denote grave accident to the new-born. If the child's nutrition is badly accomplished, it does become jaundiced usually or is very much jaundiced. In beginning of this chapter I said, in opposition to the generally received opinion, that icterus was a pathological state. Certainly the difficulty with which icterus of the first, second, and third degrees demarcate from each other forces their union under the same category. The aggravation of the constitutional state of the child proportionate to the intensity of the icterus renders the latter an evident pathological phenomenon. Further the theory which regards icterus as an "appanage of the human species," as a physiological phenomenon rests only on the recognition of the icterus. Now even admitting certain evanescent cases of jaundice have escaped me, I can certainly claim to have observed all unjaundiced children.

II.—*When should the umbilical cord be ligated.*—Before proceeding to any personal researches I should again examine Budin's memoire following step by step his conclusions and indicate the results at which Hélot and Schucking have arrived. Budin arrives at the conclusion that a child whose umbilical cord is tied from one-half to four minutes after its pulsations have ceased receives about three ounces more blood than a child whose cord is tied immediately. I have computed the amount of blood remaining in the placenta after tardy and immediate ligature in quite a number of cases, and have obtained results greater in quantity than those given by Budin, and attribute this difference to the different manner of tying the cord. In ligating immediately I, like Budin, tie the cord as soon as the child is born losing very little time. In the case of the tardy ligation, however, my method of procedure is different from Budin's. I consider the pulsation of the cord arrested from the umbilicus and not from the middle of the cord like Budin. I wait two minutes and then tie, which results in a greater quantity of blood pressed out from the placenta and a consequent gain of blood to the child. Hélot's results are less in quantity than those of Budin. Like myself his cases are less numerous than those of Budin. Hélot asks if the child really benefits by so much blood after the tardy ligature of the cord or if there be not some source of error caused by placental tears, and answers this question by an elaborate series of experiments which resulted in adding new value to Budin's conclusions. Schucking made similar researches with the same result and from the researches of these two gentlemen and my own, I am prepared to claim that the theory of Budin is demonstrable and that the child profits by a considerable quantity of blood in consequence of tardy ligature of the umbilical cord; and it follows that the child receives at least one-third more blood according to Budin, or one-half more according to Schucking. Before endeavoring to ascertain the value of the two methods of ligature the following questions present themselves:

First.—How does the blood enter the body of the new-born child after tardy ligation.

Second.—What is the value of the blood in the new-born child. In answer to the first question it may asked does the blood enter the child's body because of thoracic respiration, does it lodge in the pulmonary vessels atelectasic at the time of birth distended when the child has breathed? Is the thoracic amplification sufficient to lodge the blood in excess by reason of the tardy ligature without resulting in an increased arterial tension? On a solution of this question depends the existence of the value of Budin's practice. If the blood enters only because of respiration there is great probability that only that quantity will enter which can be lodged in the enlarged lung and Budin's practice is of value. If, on the contrary, the blood is violently forced into the circulatory apparatus in such a manner as to cause general distension, and not alone of the pulmonary capillaries, tardy ligature becomes a procedure of very doubtful value. If what passes after the delivery of the child be attentively observed, it will be noticed that the arterial pulsation of the cord ceases at first along its side and the time of cessation varies from one, two to two minutes and a half, but for a long time pulsations are noticeable near the umbilicus.

What chiefly interests us from the blood entry standpoint are the arterial pulsations along the funis. The cord during the whole time is bluish and turgid. When the arteries cease to beat it decreases in size only in its arterial portion, not in its entirety as is Budin's opinion, the vein remaining swollen and forming a helicoid turgescent bluish cord distended around the rest of the cord which is pale and decreased in size. This condition persists for at least two minutes, and it is only later that strangulations are observable at the valves, but until the arteries are absolutely free from blood, the vein remains distended by it. The explanation of these phenomena are very simple. For the first two minutes the fetal heart sends at each systole a certain quantity of blood to the cord; the uterus relaxed for a quarter or half a minute does not much compress the placenta and the child loses blood and weight (Schucking), then the uterus contracts and retracts and forces blood from the placenta into the body of the child. Proofs of the predominance of this uterine action over the fetal cardiac action are not wanting. If the vein be compressed below the umbilicus is the blood contained between the umbilicus and the compressed point drawn in by the child's respiration? In no respects, the vein remains just as distended as if the child did not breathe. When the cord is compressed in such a manner as to force the blood into the child's body, the vein diminished in size by pressure returns to its original volume soon as the pressure is removed. It is obvious this cannot result from the side of the child, but must result from uterine force. The vein, at the end of some time, diminishes in size and the site of the valves is more marked and the vein presents there an appearance of strangulation. When it is compressed, in place of feeling there a reflux of blood, there is a certainty of blood being contained therein, although not at the same tension. Here there intervenes first the thoracic respiration, secondly, to a slight extent, the elasticity and contractility of the vessel, and finally the pressure of the uterus on the placenta. The respiration doubtless plays a part, for it evidently acts on the umbilical vein in the same way that it does on some veins of the thorax. The child becomes redder and redder. I have often remarked to the assistants that the child often becomes red at the moment the arteries cease to beat. This redness has several times been livid in character, the child at the same time having evident anxiety of respiration and its mouth filled with mucus. Once these phenomena made such an impression on the assistants that one of them requested to delay no longer the ligature of the cord. When the cord is tied immediately, the modifications of the coloration of the skin in the new born are not produced in the same fashion. The child generally remains pale or rose-colored and only becomes red some hours after. In many instances the mode of umbilical cord ligation can be recognized in the color of the new-born child. This difference, although clearest soon after birth, still continues later on. These different varieties explain themselves. Budin claims that the quantity of blood flowing from the cord after immediate section varies between two and five ounces, while in tardy section the uterine contraction forces into the child's circulation about six ounces of blood. If the figures of Schucking, which allow six ounces as the total amount of blood contained in the circulatory apparatus, it seems probable that the child's blood is doubled in volume. The strength of the muscular parieties required to resist this influx of blood is astonishing. For lack of better characterization I should say that there has been performed in the child an autotransfusion. The results of tardy ligation are comparable to the plethora consequent on the local anæmia produced by Esmarch's apparatus. What is the conse quence of this reflux of blood in the adult. After the application of Esmarch's bandage Soulie found that an increase of arterial tension resulted. Schucking has attempted to ascertain the circulatory modifications produced by the different ligatures, but without result. He insists, however, that the children, after tardy ligation of the umbilical cord are lively and are not slow to cry. After immediate ligature they are apathetic, slow to cry and do not respire freely. I have not noticed these differences. I should conclude from the preceding, observations that when tardy ligature of the umbilical cord is practiced, uterine contraction forces the blood into the body of the child.

Of what value is a greater or lesser quantity of blood in the circulatory apparatus of the child from the observation of one hundred and ninety-six cases? I am prepared to affirm the blood is far from having in the new-born child the importance it has in the adult, and that the loss of a little blood is less dangerous than its having too much; and I am prepared to affirm that immediate ligature of the cord is less liable to cause icterus than tardy ligature, and that the difference is very noticeable in this respect: but that the mode of ligature is only an accessary cause of icterus which may come on under very diverse circumstances. In a general way from all these facts the following conclusions are arrived at. That the time when section and ligature of the umbilical cord is to be made cannot be settled, and that in order to settle these, two things almost impossible to determine require to be settled first, the quantity of blood required by the new-born; second, the method of blood progression in tardy ligature. However, there is no doubt that tardy ligature causes an increase of the vascular tension. Now since the umbilical arteries beat not only near, but far from the umbilicus, the reflux of blood through these is a means of security: as when they cease, the circulatory apparatus is submitted to uterine pressure causing distension.

I believe, therefore, that

First, the cord should be tied when the umbilical arteries cease to beat.

Second, that it is not dangerous to bleed the child from the cord, in case of blue asphyxia of the new-born.

III.—*The pathogenie of icterus neonatorum.* In regard to this subject taking into account, the researches of myself, Hervieux[1], Porchat[2], Weber[3], West[4], Picot[5], Zweifel[6], Kehrer[7], Vulpian[8], Frenchs[9], Gubler[10], Buhl et Heckr[11], Krebs[12], Virchow[13], Neumann[14], Orth[15], Ruge[16].

I should be inclined to conclude that

There are two species of icterus in the new-born, one of them being peculiar to the new-born, the other found also in the adult.

That the icterus of the new-born can be subdivided into an icterus of hæmatic and an icterus of biliary origin.

That the icterus of hæmatic origin is of two forms, a grave and a benign, and the latter is by far the most common.

That biliary icterus is always grave, coming after congenital obliteration or arrest of development of the bile ducts, or after umbilical phlebitis.

That the icterus found in the new-born, which is analogous to the icterus of the adult is of biliary origin.

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[1] These de Paris, 1847.
[2] These de Paris, 1855.
[3] Beitraye der path, auot der Neugeboren, 1851.
[4] Diseases of children, 1875.
[5] Manuel des malodies enfants.
[6] Archir fur Gynaekolojie XII.
[7] On cit.
[8] Ecale de Medecine, 1876.
[9] Leber Krankheiten, 1875.
[10] Society de Biolojie, 1859.
[11] Klenek der Geburts Kunde.
[12] Handbuch der path Anatomie.
[13] Archiv for path Anatomy und Klinesche Medicin I., 419.
[14] Archiv der Hulkunde, 1867-1868.
[15] Archiv fur anat und physund Klinesche Medicin, 1875.
[16] Zutschrift fur Gynalk, BI.

CHEMISTRY.

"Diruit ædificat, mutat."—Hor.

On Tonga; a Remedy for Neuralgia Used by the Natives of the Fiji Islands. By Dr. Sidney Ringer, Professor of Medicine at University College; and Dr. William Murrell, M.R.C.P., Lecturer on Physiology at Westminster School of Medicine, etc., London, England.

A few months ago Mr. Ryder, a gentleman residing in Fiji, placed this remedy in our hands with the following account: It has been used for several centuries by the aborigines of the Fiji Islands. A European, who married the daughter of a chief, learned the secret from his father-in-law, in whose family the knowledge of the composition of this remedy had been an heirloom for upwards of two hundred years. This European gave the drug to Mr. Ryder, who requested us to test its virtues.

This gentleman tells us that the remedy consists of parts of at least two plants, whose botanical relations, however, he does not know. He has returned to Fiji, and intends sending specimens of the plants, that we may learn their natural order, etc. The parts of the plants are broken up into a coarse powder, and then wrapped up in a cover of the inner bark of the cocoa-nut tree. Mr. Ryder gave us the following directions regarding its use: "The bundle, without being unfastened, to be steeped in half a tumbler of cold water for twenty minutes, then squeeze the liquid from the bundle back again into the tumbler, and take a claret glass of the infusion three times a day, about half an hour before each meal. Dry the bundle and hang it up in a dry place to prevent it getting mouldy. It will answer for twelve months."

Mr. Ryder sent a large packet of the powder to Messrs. Allen and Hanburys, of Plough Court, City, who have prepared a liquid extract, containing one part of the drug in one part of the extract. Of this Mr. Ryder recommends a drachm three times a day. He and his friends have tried the remedy extensively, and find it most successful. He finds that it generally cures by the second or third day. In eight or ten days the pain may return, when a few additional doses permanently remove the pain. It has been used in Sydney with great success.

We have used this remedy in eight cases of neuralgia; six were promptly cured; one was much improved; in the other, after a week's trial, it failed. We give a short account of these patients.

A woman, aged twenty-three, had suffered for fourteen days from severe neuralgia of the infra-orbital and great occipital nerve. She had four severe paroxysms in the day, lasting from half an hour to an hour and a half. Many of her teeth were bad. Three doses of the extract cured her.

A woman, aged about fifty-five, had suffered from severe neuralgia for a week. The twisting dragging pain affected the supra-orbital branch of the fifth and the great occipital, and was both continuous and paroxysmal. She did not improve, though the infusion from a bag was used for a week. The bag had been used on several occasions, and possibly had become inert.

A woman suffered from neuralgia in the left great occipital nerve. Four half-drachm doses of the liquid extract cured her.

A man, aged twenty-five, had suffered for a fortnight from severe bilateral neuralgia in the temples, in the eyes, and under the eyes. Half a drachm dose of the liquid extract thrice daily cured him in three days.

A woman, aged twenty, for ten days had suffered from severe neuralgia in the first and third branch of the fifth nerve. She had daily about five paroxysms, each lasting from one to two hours. A drachm of the liquid extract thrice daily cured her in three days.

A girl, aged eighteen, suffered from toothache and severe neuralgia along the lower jaw, and in front and behind the ear. Half a drachm of the liquid extract cured the neuralgia in twenty-four hours, but the toothache continued.

A man, aged sixty, who suffered from rather severe bilateral orbital neuralgia, was greatly benefited in three days by a drachm of the extract thrice daily.

A woman, forty years old, had suffered for a month with about six severe paroxysms daily of pain in the second branch of the fifth nerve. The infusion made from a bag cured her in three days.

This remedy, whilst apparently highly useful in neuralgia, produces no toxic symptoms, for we have given two half-ounce doses of the liquid extract at half an hour's interval, and repeated it again in two hours, without producing any effect beyond slight drowsiness. To another person we gave three two-drachm doses at half an hour's interval, and only produced slight drowsiness. These doses did not affect the pupil, nor increase nor lessen the secretion of the mouth or skin, neither did they affect sensation of the skin, supplied by the fifth nerve.

Tonga does not affect the pupil when topically applied to the eye, for Mr. Copley made observations on three people, and applied in each case an aqueous extract (1 in 1) to the eye, repeating the application four times at an interval of fifteen minutes, but the pupil remained unaltered. —*Lancet.*

PRESERVATION OF MEAT BY DEXTRINE.—In the *Comptes Rendus* of the French Academy for December 6, there is a note by M. J. Seure on some experiments made by him in drying and preserving meat by means of dextrine.

Of the three specimens exhibited before the Academy the first was a slice of lean meat which had been buried in dextrine and left exposed to the air on a shelf in a closet for twenty months. The meat had become mumified; but, on putting it in water, it separated from the dextrine and assumed its original physical character. The second was meat which had been chopped up coarsely and mixed without any particular care with dextrine, so as to obtain a thick paste. This paste was dried in the air, and retained its properties like the former. The third was meat beaten to a fine pulp with dextrine and run into a mould, the result being a very hard, dry, homogeneous cake of a handsome appearance. Each of these specimens when exhibited had been preserved for the same length of time—twenty months.

EXPLOSIVE MEDICAL COMPOUNDS.—The medical and pharmaceutical journals have recorded a number of cases of explosions having taken place by the admitxure of explosive substances. Among the prescriptions having given rise to such accidents we will mention the following: 1st. Mixture of hypophosphite of lime, 50 centigrammes; chlorate of potash, 3 grammes 75 centigrammes; lactate of iron, 30 centigrammes. 2d. Solution of glycerine, 8 grammes, in acid chromic, 4 grammes. 3d. Mixture of chlorate of potash, tr. ferri perchlorid, and glycerine has exploded in the pocket of a patient. 4th. Chlorate of potash mixed with catechu and used as a dentrifice, may explode in the mouth of the patient, provided hard friction is used. 5th. Pills of oxide of silver (frequently used in England in affections of the stomach) have exploded in the patient's pocket. Pills of permanganate of potash and ferri redact., pills of golden sulphur of antimony and chlorate of soda, may explode during or after their preparation. It is, therefore, essential to avoid associating glycerine, and, in general, substances easily reduced. with such oxidizing agents as chromic acid, chlorates, permanganates, and certain organic acids.—*Bull. gén de thérapeut.*

SENTIMENTAL CHEMISTRY.—A French chemist is said to have condensed the body of his wife into the space of an ordinary seal, and had her highly polished and set in a ring. He made a nice income by betting with lapidaries and others that they could not tell the material of the set in three guesses, and, after pocketing the money, would burst into tears and say, "It is my dear dead wife. I wear her on my finger to keep alive pleasant remembrances of her."

TO TEST HOUSE DRAINS.—In London house drains are tested by pouring in at the highest point of the pipes an emulsion of oil of peppermint and water, following this up with a couple of buckets of water to wash the emulsion through the drains. Should there be any leaks they can be located by the penetrating smell of the peppermint. The same system, we believe, is used in Boston.—*Druggist Circular and Chem. Gazette.*

FLUID EXTRACTS OF DIGITALIS AND COLCHICUM.—Dr. E. R. Squibb says that these are more eligible preparations than the tinctures. They are eight times as strong, and cost only half as much.

ACTION OF VEGETABLE ACIDS ON TIN.—Professor Charles E. Munroe, of Annapolis, Md., states that the ordinary fruit acids, such as those contained. in apples, tomatoes, rhubarb, lemons, etc., all acted upon tin. Some cider which he examined, and which had been stored in a tin fountain, contained 117 milligrammes of metallic tin to the liter in solution. One case was given where persons eating fruit preserved in tin cans were made violently sick, and tin only was found in the fruit. Corrosion of tin pipes by water was referred to, and it was suggested that the corrosion was due to vegetable acids in the water.

COMPOUND LICORICE POWDER.—As this laxative powder, under the name *Pulvis Glycyrrhizæ Compositus*, has come into popular use of late years, being imported, so to speak, from the German Pharmacopœia, it may be interesting to the practitioner to know that it is not by any means perfect in its composition. It occasionally has a tendency to gripe, and, we think, should contain a larger amount of fennel. The following is its formula:

℞. Glycyrrhizæ pulv.,
Sennæ pulv., . . . āā ʒ ij.
Sulphuris loti,
Fœniculi pulv., . . . āā ʒ j.
Sacchari alb., ... ʒ vj.
M

A recent writer in the Philadelphia *Medical Times*, Dr. E. T. Blackwell, makes the following comments upon it: "This prescription is faulty, not only in that it is weak in laxative power, but because of the very great amount of sugar, which increases fermentation in sour stomachs, rendering it very objectionable in many cases. The following scheme, in which the remedial drugs occupy the leading place, and the corrigents and demulcents their appropriate relatlon and amount, I propose with the name of *Pulvis sennæ compositus*, as a substitute for the forementioned:

℞ Sennæ pulv.,
Sulphuris loti,
Sacchari albi., . . . āā ℥ ss.
Fœniculi pulv.,
Glycyrrhizæ pulv., . . āā ʒ ij.
M

No one will question, I think, the improvement in bringing the quantity of sulphur to equal that of the senna, which it so much surpasses as a laxative; nor does it prove less acceptable to the taste, while it is better tolerated by the stomach. The dose is a teaspoonful to a desertspoonful, in water. As previously stated, a still larger amount of fennel might be given with advantage, and we doubt the propriety of increasing the original quantity of senna as proposed. It would be well, perhaps for the practitioner always to write the prescription in full, instead of depending upon the title only; or, perhaps the committee now actively engaged in revising the United States Pharmacopœia may suggest a formula which may be free from the objections urged against that of the German Pharmaco pœia."—*College and Clinical Record.*

INTERESTING TESTS MADE BY THE GOVERNMENT CHEMIST.—Dr. Edward G. Love, the present Analytical Chemist for the Government of the United States, has recently made some interesting experiments as to the comparative value of baking powders. Dr. Love's tests were made to determine what brands are the most economical to use. And as their capacity lies in their leavening power, tests were directed solely to ascertain the available gas of each powder. Dr. Love's report gives the following:

"The prices at which baking powders are sold to consumers I find to be 50 cents per pound. I have, therefore, calculated their relative commercial values according to the volume of gas yielded on a basis of 50 cents cost per pound."

Name of the Baking Powders.	Available Gas. Cubic inches per each ounce Powder.	Comparative worth per lb.
"Royal" (cream tartar powder),	127·4	50 cts.
"Patapsco" (alum powder),	125·2	49 "
"Rumford's" (phosphate), fresh,	122·5	48 "
" " old,	32·7	13 "
"Hanford's None Such,"	121·6	47¾ "
"Redhead's,"	117·0	46 "
"Charm" (alum powder),	116·9	46 "
"Amazon" (alum powder),	111·9	44 "
"Cleveland's (short weight ¾ oz.),	110·8	43 "
"Czar,"	106·8	42 "
"Price's Cream,"	102·6	40 "
"Lewis's" condensed,	98·2	38½ "
"Andrew's Pearl,"	93.2	36¾ "
"Hecker's Perfect,"	92·5	36 "
Bulk Powder,	80·5	30 "
Bulk Aerated Powder,	75·0	29 "

NOTE.—"I regard all alum powders as very unwholesome. Phosphate and tartaric acid powders liberate their gas too freely in process of baking, or under varying climatic changes suffer deterioration."

NEARLY two million pounds of horse flesh are said to have been eaten last year in Paris.

BRIGHT PROSPECTS FOR THOSE OWNING PINE LANDS AT THE SOUTH.—We are in receipt from Mr. S. W. Hamilton, of Lawrence, Kansas, of a sample of lumber made from straw, manufactured after a process patented by himself, the particulars of which he does not explain. He informs us, however, that he can manufacture lumber like the sample sent, in any desired length, from 12 feet upward, and to 32 inches in width, at a cost competing with the better or finishing grades of pine, although he does not inform us whether this competition will apply equally to sections where lumber is comparatively cheap, as at Chicago, and at Western grain-producing points, as at Kansas. We imagine, however, that the expense will vary but little at any point where straw is obtainable in large quantities.

The manufacture is, of course, confined to a grade which will compete with the better class of lumber, as there would be no object in filling the new product with knots, and shakes would scarcely be obtainable even if desired, while sap and decayed wood must be impossibilities. The sample sent to us will hold a nail as well as wood, is equally susceptible to a high painting finish, and can be polished to as high a degree as is at all desirable. Being made waterproof, we can discover no possible reason why it should not be as durable, or even more so, than pine or even oak, while its adaptability is evidently as great for roofing purposes, as for the fine work of a dwelling.—*Scientific American.*

THE taste of chloral, which to many persons is excessively disagreeable, may, it is said, be disguised by administering it in syrup of gooseberries, with the addition of a drop of chloroform to each grain of chloral.

———o———

MISCELLANEOUS.

" Non omnes eadem mirantur ament que."

Lister's Cat-Gut Ligature.—The subject chosen by Mr. Lister as the theme of his address on first taking the chair at the Clinical Society was peculiarly well chosen, and dealt with in a manner worthy of the speaker and the Society and profession addressed. The value of the catgut ligature can be tested only by clinical experience, and there is no question of surgical therapeutics exciting more interest—and worthily so—at the present time than Mr. Lister's attempt to reintroduce an animal ligature. But Mr. Lister's Address shows, as pointed out also by Dr. Wilks in his address at the Pathological Society, how intimately all clinical study is bound up with pathological research, and what valuable aid it receives from chemistry and scientific philos ophy, and as an illustration of these facts the address is well worthy of study.

Mr. Lister acknowledges, as he was bound to do, that hitherto the catgut ligature has been uncertain in its action, and therefore not entirely trustworthy. Sometimes softening too soon and exposing the patient to the danger of hæmorrhage, it has at other times resisted too long the absorbent action of the soft tissues and induced local irritation. But these occurrences have been but the exceptions to the general success attending its use. With characteristic discrimination he foresaw that this irregularity in the changes undergone by the dead passive catgut would be explained by some differences in its physical or chemical characters, and with laborious research he endeavoured to find out the clue to this variation, and if possible to devise some mode of obtaining a ligature uniform in character and posessing all the qualities of the best specimens of catgut hitherto prepared. In this he states he has been successful. It has been rumoured for some time past that such was the case, but that Mr, Lister was hesitating to publish his mode of preparation until fully convinced that it was all he desired it to be. And those who know Mr. Lister best will feel most confidence that what he has now made public will bear the test of experience. We need not here refer to the treatment to which Mr. Lister subjects catgut, but must only point out that while simple, cheap, and rapid, it is warranted to produce a thread. supple, very strong, of which a knot properly tied holds without any slipping, and which is slowly but surely absorbed by the tissues, neither yielding too soon nor remaining too long. It may seem that this is "too good to be true," that unless there is some reservation to be made it is an exception to most if not to all surgical procedures. Lengthened experience can alone determine this point.

The artificial arrest of hæmorrhage is perhaps the greatest surgical triumph, and there is no landmark in the history of the practice of surgery on which we can look back with greater pride than on the introduction of the ligature by AMBROISE PARE. Since that time every competent practitioner has been armed with a certain means of arresting, at least temporarily, loss of blood from any vessel around which a thread can be passed. And if the tendency in late years has been rather to concentrate attention upon the failures attending the use of silk and hempen threads, we must not lose sight of the incalculable advantage they have proved during the last three hundred years. The proportion of failures has been small indeed, and if it be that to this generation of surgeons, and to Mr. Lister in particular, the honour of *perfecting* the ligature will accrue, we must not withhold our meed of admiration from that man who first conceived the idea of closing the mouth of a bleeding vessel by a constricting thread, and carried it out with a success which has been shared in by countless thousands in later years.

There is one feature in this communication of Mr. Lister's that will recommend it very widely. It is the fact that it is a simplification of one of the parts of his antiseptic treatment which is generally supposed by those who do not practise it to be too complicated. We doubt not that its author is fully alive to this consideration, and that he would welcome any method by which a like simplification could be made in his mode of dressing, while all its claimed advantages are retained, or made more certain. Another fact of importance is Mr. Lister's admission that the catgut ligature is not an integral part of his antiseptic treatment, but that it is of avail when that cannot be, or is not fully, carried out; it thus becomes generally applicable, and the value of Mr. Lister's work proportionately increased.—*Lancet.*

SPEECH FOR THE DEAF.—The International Congress on the Education of the Deaf, held at Milan in September last, and of which the official report of the proceedings is now published, declared that, considering the incontestable superiority of speech over signs in restoring the deaf-mute to society, and in giving him a more perfect knowledge of language, the oral method ought to be preferred to that of signs for the education and instruction of the deaf and dumb. The Congress further declared that, considering that the simultaneous use of speech and signs has the disadvantages of injuring speech, lip-reading, and precision of ideas, the pure oral method ought to be preferred.

The papers read at the Congress in illustration of the method here approved were full of interest, as showing not only the mental, but also the physical advantages derived from it by the deaf and dumb. In this connection a thoughtful paper included in the proceedings, on the Health of Deaf-mutes, by Dr. E. Symes Thompson, deserves the special attention of medical men. It shows that under the simple phrase "speech for the deaf," a system of bodily and mental regimen of the highest importance for the welfare of the unhappy deaf-mute is included. We are glad to find that the system approved by the Congress, which is popularly known as the "German" system, is gradually making its way in England. The oldest institution for the education of the deaf and dumb has recently determined to abandon their old system in favor of the so-called German or oral method. The education of the deaf and dumb may therefore be said to have been completely revolutionized. The attention of the public in this country was, for the first time, directed to the oral system of the education of the deaf by Dr. Dalby, in a paper read at the Social Science Congress at Leeds in 1871. The subject gave rise to much discussion, and was met by considerable opposition on the part of those whose profession it was to educate deaf children, and who had followed the system then almost universal in England, termed dactylology, or talking on the fingers. Since then the oral system of education has been followed and propagated in an energetic manner by the Association for the Oral Instruction of the Deaf and Dumb.

EXCISION OF THE STOMACH.—On the 29th ultimo Professor Billroth, of Vienna, excised about six inches of the greater curvature of the stomach, including the pylorus, for infiltrating carcinoma. The patient was a woman aged forty-three, mother of eight living children, who was suddenly seized with grumous vomiting last October. Marked symptoms of cancer of the stomach and stenosis speedily followed. The operation was decided on in consequence of incessant and uncontrollable vomiting which threatened inanition. The operation lasted one hour and a half. There were extensive adhesions to the omentum and colon. Fifty silk sutures were used to unite the duodenum and the remaining portion of the stomach. On the 5th inst. (a week after the operation) the sutures were removed from the external wound, which had united without reaction. The patient was doing well, and was able to take coffee, tea, and other light nourishment. This is the second time the operation has been done. D. Péan did it in 1879, removing a carcinomatous pylorus. In that case catgut ligatures were employed. The patient died on the fourth day.—*Lancet.*

THE DISTRIBUTION OF THE RED BLOOD-CORPUSCLES.—S. D. Kostjurin has shown, in the *Petersburger Med. Wochenscrift*, that the proportion of blood-corpuscles in the serum varies considerably in different parts of the body, and in the same part under different conditions of the circulation. His observations were made with Malassez's numerator on the blood of healthy and diseased men and also in animals. He found that the red blood-corpuscles are considerably more numerous in the capillaries of the skin of the supra-clavicular region than in the skin of the little toe, and that this difference becomes more marked when the rapidity of the heart's action is increased. In healthy men the extremes observed were 274,000 and 1,037,600 in a cubic millimetre of blood; and in patients, especially those suffering from fever or valvular disease of the heart, the numbers varied between 621,300 and 1,847,000 in the cubic millimmetre. Observations on dogs showed that if the rapidity of the blood-stream be lessened by cold, or by ligature of the supplying artery, the relative number of corpuscles is markedly lessened.

BLEACHING ALBUMEN BY MEANS OF ELECTRIC LIGHT.—The albumen, from which the blood corpuscles have been entirely removed, is subjected to the action of an electric-light, the rays of which are properly collected by means of lenses, etc., and will be bleached within twenty-four hours. The albumen may be in a dry or fluid state.—*L. Manet* (*Monit. prod. Chim.*)

AN examination has taken place at Brussels of the railway employes, in order to test their eyes. More than one-twentieth of them have been found defective, and consequently will be discharged as being unable to fulfill their functions with a sufficient security for travelers.

THE POPULATION CENTER OF THE UNITED STATES.—Ten years ago the center of the population of the United States was about forty-eight miles east of Cincinnati, O. The superintendent of the late census announces that the growth of the great West during the past decade carried the center of population about fifty miles west, while the large increase in the Southern States carried it a little southward. The result places the center of population within the limits of Cincinnati.

COMPARATIVE DEATH RATES.—It would astonish most people of this country if they could appreciate the fact that the death rate of New York is far larger than that of any other city existing in the same climatic condition. To follow out the interesting line of inquiry suggested by this startling statement the reader is referred to the following important table.

The death rate is estimated on the number of deaths in 1,000 of the population. From 1870 to 1877 the rate is calculated upon the census of 1870. After that and until 1877 on an estimated population of 1,069,362, and for 1880 upon the census of the year which places the figure at 1,206,577. The following table presents the death rates since 1868:

Year.	*Rate.*	*Year.*	*Rate.*
1880	25.89	1873	29.68
1879	25.82	1872	33.76
1878	24.93	1871	28.26
1877	24.50	1870	28.24
1876	27.62	1869	27.13
1875	29 47	1868	27.25
1874	28.94		

The figures for 1880 Dr. Nagle does not consider as exact, although they are drawn from the best available sources. The reason he gives is that the census was taken at a time when the summer exodus had fairly begun. However, they are close enough for all purposes of satisfactory comparison. In examining the records of the Bureau of Vital Statistics it is shown that the death rate among the colored people, of whom New York has a population of 20,433, is 33.86 in 1,000, a rate equal to that of Naples. It is interesting to note the death rate of the large cities of the world, but as the figures for 1880 are of course not yet at hand the returns for 1879 are given instead:

CITIES OVER 100,000 IN THE UNITED STATES.

City.	*Death Rate.*	*City.*	*Death Rate.*
New York,	25.82	Boston,	21.03
Brooklyn,	20.16	Cleveland,	16.72
Pittsburg,	21.16	San Francisco,	15.80
Chicago,	16.49	Milwaukee,	14.35
Buffalo,	15.81	Cincinnati,	17.23
Philadelphia,	17.07	New Orleans,	36.12
St. Louis,	11.03	Washington,	25.59
Baltimore,	18.45	Providence,	19.89

FOREIGN CITIES—OVER ONE HUNDRED THOUSAND.

London,	23.40	Melbourne,	21.95
Liverpool,	29.26	Paris,	24.71
Birmingham,	25.45	Marseilles,	31.08
Manchester,	27.78	Rome,	24.15
Glasgow,	25.79	Naples,	33.22
Dublin,	29.46	Berlin,	29.63
Hamburg,	26.87	Breslin,	30.82
Copenhagen,	22.30	Vienna,	29.77
Calcutta,	37.01	Amsterdam,	24.22
Madras,	48.00	Bombay,	41.84
Georgetown		Alexandria,	40.74
(Demerara,)	8.96	Moscow,	39.02

MEDICAL NEWS.

"Nulla dies sine linea."

BELLEVUE HOSPITAL MEDICAL COLLEGE will, after the present session, return to its former policy in regard to sessions, and the requirements for graduation. The Faculty announce that this is done, because, from the size of the class of the present session, it is evident that the profession are not willing to give the support expected, in the progressive standards adopted a year ago, and at present in force. Rules and requirements for attendance and graduation, each college must make for itself. The College Association cannot prescribe, enforce, or regulate them. Indeed the circumstances surrounding each college are so varied, and often so different, that even had the Association of Colleges any power whatever remaining it would be impossible to use this judiciously, in regard to the policy and administration of each institution. Each college had then best adopt the rules and regulations deemed best for its latitude and longitude, for its prospects and for its prosperity; and the College Association will be as powerless to prevent this course, as the historic bull was to stop the advancing locomotive.

The Association of American Medical Colleges is a palpable failure; impotent, worthless, and fast approaching dissolution; and all American Medical Colleges are again relegated to the wisdom and judgment of their trustees and faculties, for administration and development. The press, speaking for the profession, can only say that such seems to be the resistless drift and force of the current. Each college *must* be judged and will be judged by the profession. By their fruits only shall they be estimated and esteemed.

DR. J. MARION SIMS is now at St. Augustine, Eastern Florida, and is doing exceedingly well.

DR. GEORGE A. OTIS, SURGEON U. S. A.—The very many friends of this erudite surgeon, distinguished author, and accomplished gentleman will be pained to learn that he died of apoplexy, in Washington, D. C,, early in February. The details of his life, writings, and labors are published in this number.

GENUINE AND SPURIOUS LECTURES.—The custom adopted by several medical Journals of publishing reported lectures, without the knowledge or consent of the lecturers, is certainly very unjust to those gentlemen and to the supporters of the Journals. Such lectures are never accurate, and do injury to their authors: and they induce readers to suppose that these Journals are selected as mediums of publication by the lecturers, when this is is not the truth. Such a proceeding is certainly very reprehensible. Every lecture originally published in this Journal may be accepted as coming directly from its author.

THE NEGRO ON MEDICAL EDUCATION.—The Fifth Annual Commencement of the Meharry Medical College, Nashville, Tenn., was held on the night of the 24th. On account of the majority of the class (negroes) desiring a three years' course, there were but three graduates.

NEW YORK MICROSCOPICAL SOCIETY held its third annual reception February 11th.

THE New York *Medical Record* is opposed to the printing, by Congress, of any more copies of the Medical and Surgical History of the War. It states that there are already sufficient copies in existence and if any one wishes them they may be obtained at "old book stands." Those physicians who were fortunate enough to obtain these volumes have prized them too highly to sell them to "old bookstands," and even had they done so, how are the 60,000 physicians of this country to visit these stands? This is unjust to the preparers and receivers of these most valuable volumes. The fact is they are real treasures and every physician would be glad to obtain them.

FUCHSINE is now claimed to be the best medicinal agent for controlling albuminuria.

A MEDICAL COLLEGE SWINDLE.—The Medical University at Charleston, West Virginia, known as the "Livingstone University of America." The West Virginia Legislature has the matter in hand and will put an extinguisher upon this fraud.

CURIOUS.—Local applications of turpentine on diphtheritic patches, and the use of ergot in diabetes insipidus are claimed to be new remedies.

THE Kings County Medical Society of Brooklyn, has determined that residence in that city is not calculated to induce or aggravate bronchial, laryngeal or nasal catarrh.

INTERESTING BILLS.—To legalize cremation in New York; to establish night service in Brooklyn; to have investigated the Buffalo Insane Asylum and to prevent pleuro-pneumonia in cattle, will soon be passed and become laws.

SMALL-POX continues to spread in Western States; it is very prevalent in Chicago and at Des Moines.

ADULTERATION OF FOOD AND DRUGS.—Congress failed to establish a commission to prevent these admitted frauds.

THE annual report of the National Board of Health has just been made to Congress; the salient points will be given in the next number. The President has nominated Dr. Charles F. Folsom of Mass., to be a member of the Board.

LARYNGOLOGICAL ASSOCIATION meets at Paris, in September, 1882. Only those who have nothing to do, have time enough for pronouncing the name of this body.

A DISGRACE TO CIVILIZATION.—The condition of the streets, gutters and sewers of New York.

THE Edinburg Medico-Chirurgical Society reports a case of unruptured hymen in a prostitute under treatment for gonorrhœa and syphilis. The hymen was lax and freely movable. Such cases, not very uncommon, have a medico-legal significance, as an unruptured hymen is usually regarded as legal proof of non-intromission.

THE MALARIAL PARASITE, the bacillus malariæ, is believed by Prof. Tommaso-Crudeli (who first called attention to it) to select the spleen and marrow of the bones as its chief nidus. So far, all that has been written in regard to this spore is theoretical in character. The theories are however as good as any others (now before the profession) in regard to malaria; Dwight's, Cartwright's, Saulsbery's, etc.

NEW YORK has had a mass meeting to protest against filthy streets.]

PRACTICAL PHYSIOLOGY.—An old lady who has several unmarried daughters feeds them on fish diet, because it is rich in phosphorus and phosphorus is the essential thing for making matches. —*Students' Journal.*

OBITUARY.—The *Obstetrical Journal of Great Britain and Ireland* terminated its existence at the end of last year.

IN Illinois, the effect of the law governing the practice of medicine has been to increase the number of licensed practitioners from 3,600 in 1877 to 4,825 in 1880. In the same period the unqualified were reduced from 3,800 to 1,500.

DR. GORI recently presented to the Institute of France a printed bill of D. Chorez, spectacle-maker of Paris, dated 1625, in which he describes binocular spectacles, of which he offers a pair to the king. Hitherto, the invention of binocular spectacles has been attributed to Antoine-Marie Schyrle, a Bohemian Capuchin friar; who was born in 1507, and died at Ravenna, 1660.

A LIEUTENANT of the Tenth Regiment being in danger of death from diphtheria, Mr. Henry Grier, the army surgeon, performed tracheotomy, and then applied his own mouth to the tube to restore respiration. The patient unfortunately, died, but the surgeon sustained no ill consequences. For this act the Albert Medal was conferred upon Mr. Grier.

DR. NACHTEL has received the Cross of the Legion of Honor in recognition of his services in having established a night medical service in New York, and for his laudable efforts in endeavoring to establish an ambulance-service for street-accident in Paris.

DR. KEPPLER in his sixth ovariotomy, found three ovaries with their corresponding fallopian tubes.

OVER one hundred members of the British Medical Association have signed a petition in favor of cremation.

THE University Hospital, at Philadelphia, has been given the sum of $50,000 with which to erect a new wing for incurables in connection with the hospital.

FRANK BUCKLAND, the English Naturalist, is dead at the age of 54. It was he who discovered in 1859, in the vaults of St. Martin's Church, Charing Cross, the coffin of the great John Hunter, and had it removed to Westminster Abbey.

SIR WILLIAM GULL and Sir James Paget, it is stated, receive from professional fees from $50,000 to $75,000 annually. Sir Charles Locock, the Queen's accoucheur, received one year $130,000, which is believed to be the largest income ever received by an English medical man.

THE estimated total number of American seamen is 170,000, and of this number from 40,000 to 50,000 now have or have had syphilis. Among 20,000 seamen treated in 1878–79, the per cent. of mortality from syphilis was was one-fortieth of one per cent.

PATENT MEDICINE ALMANACS contain, of course, very disgusting testimonials in regard to their authors, but such testimonials are not quite as bad, as those which several medical Journals contain in regard to—themselves.

THE *Texas Medical and Surgical Record*, Vol. 1, No. 1, writes of the genial Holmes and gynæcological Thomas, as Oliver *Wendall* Holmes and Dr. *J. Galiard* Thomas.

DEATHS.—It is a source of regret to their many friends to learn that Dr. John Irving, once of Charleston, S. C., died recently, in his 81st year, at Bergen, N. J., and that Dr. J. C. Habersham, of Savannah, Ga., died in January last in that city.

HEALTH BILL.—West Virginia has just passed a bill creating a State Board of Health. This result is largely due to the influence of the physicians in her legislature and those working actively in conjunction with them.

A NEW MEDICAL COLLEGE IN PHILADELPHIA. — It is stated that there will soon be organized a new medical college in Philadelphia, under the charge of members of the regular profession. A charter of one of the colleges existing before the war has been resurrected, and a location near Broad and Market Streets is selected for the new institution.

Medical Colleges will soon like Medical Journals, be found at every city, town and cross-roads; professors will be so numerous that America will be the land of spurious dignity, superficial pretence, and absolute absurdity.

INTERNATIONAL COPYRIGHT.--That disregard of the rights of authors is not confined to American publishers is shown by the fact that the series of "American Health Primers" is being reproduced in England under the name of "Ward and Locke's Long Life Series." In such of the republications as have reached this country the slight alterations that have been made seem to have been designed to conceal the American origin of the books.

EDITORIAL.

"Nullius addictus jurare in verba magistri."—HOR.

BUSINESS NOTICES.

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GRADUATING SEASON AND THE MEDICAL COLLEGES.

This is the season when the Winter terms of medical colleges are closed, and each graduate, like "Noah's weary dove," is cast forth from the Medical Ark to find a professional Ararat for his support.

What has been the teaching of the past session in American schools? It is that students have flocked to the colleges which have adhered to "the two-term system," and have comparatively deserted the representatives of "a third-term curriculum." And this is only what was anticipated. The profession seem to take little or no interest in this matter; certainly little or none in regard to "a third-term curriculum," and students are largely guided by their opinions and advice.

This Journal has always condemned and will always condemn the folly of making "the length of term," or "the number of terms" instead of "qualification," the basis of requirement for graduation. It is in effect saying that that the circle of a race-course must be made by the mule and the thoroughbred in the same number of seconds. It is condemning the student of talent and energy to be jugulated with the student of indolence and stupidity; and giving to these last the privileges and advantages which in justice should be given only to the representatives of ability and worth.

But whatever be the theories in regard to this matter, experience has demonstrated that the graduates after a nine months' curriculum are the equals of those who have dawdled for years through the best medical institutions. The graduates of the University of Virginia are fully and always the equals of the best graduates of Harvard or of the University of Pennsylvania.

Again no one who has had proper experience can have failed to observe that students who leave a college in March are better prepared than they are when they return in October; or that students who take one course in nine months (as at the University of Virginia) or two courses in nine months (as when students attend New York colleges in Winter and other colleges in Spring) are far better prepared than those who seek to graduate with an interval of six months (from March to October) between their courses. And the reason is perfectly plain; the students last described spend the period of the interregnum in rest, if not in professional sloth.

But putting aside all theories, the test has been made. Those colleges which observe the dictation of the Association of Medical Colleges as to a third term will, like that Association, fail beyond peradventure; while those which like the Jefferson Medical College, Pa., (though a member of the College Association) repudiate such dicta will succeed. Students as a class are poor, and they will go to schools of character where they can soonest graduate. This truth is a fundamental one, and it should guide the Faculty of every college.

Colleges of character will practically appreciate this fact and they will cater to it; and this is another fundamental truth which should guide every Faculty. The Jefferson Medical College has seen and appreciated both of these truths, and what is of far more consequence has acted accordingly. The result is that while many colleges of character and reputation have tied their own hands with the theoretic bands from the theoretic loom of the theoretic College Association, the Jefferson Medical College which has repudiated this Association and acted independently (if strangely) has had the largest class on record. The same may be said of other colleges.

Colleges will see the error of allowing diverse and even rival interests to legislate for them, and will hereafter act independently and separately.

Bellevue has made a fair and honest effort to adopt the theoretic changes suggested by others, and has suffered for it. Hereafter this college (as the Professional Public are informed,) will act independently and will return to the system which time and experience demonstrated to be safest.

The University of New York has independently pursued the even tenor of its way and has prospered accordingly.

Other colleges will do likewise, and all that are wise will do so without delay.

This Journal is entirely independent and impartial in this matter. It is entirely unhampered by any corporate ties, influences or interests ; and will remain so.

Wishing all reputable medical colleges abundant success, it will advocate the course deemed best for the medical Profession ; entirely uncontrolled by the results affecting any Institution. The editor after an experience of nearly thirty years as a practitioner, an experience of nearly half that period as a teacher and school manager, and after carefully studying college administration in this country for twenty years, believes that he is reasonably well informed on these subjects. With such knowledge, and with such experience, and with the welfare of the Profession as his object, he can not but advise each medical college to be its own guide and manager. The Press and the Public will watch; sustain and praise, when praise is merited and proper ; and will condemn justly and plainly when this is necessary.

Such a course for the colleges, for the Public and for the Press, with a Board of Examiners for each State will, it is believed, be the true solution of the vexed problem of American medical education.

Mind and Muscle.—Everybody says that America is a great country and everybody believes it, or at least tries to believe it, but there are some conspicuous facts which must no longer be facts before America can be justly placed in that niche in the temple of nations which her admirers have selected and claimed for her.

The representatives of some of the greatest minds in this country are leading lives of isolation, suffering and even of want, while the vulgar and brutal representatives of muscle are honored and idolized by the public ; they have receptions accorded to them; they are fêted and worshipped. They have services of plate bestowed in public, and are the pets and idols of the masses. Hanlon, it is said, is to have the taxes on his little estate remitted by the Canadian Government; he is to have, on his return from England, a public reception at Toronto, where he is to be publicly presented with "a massive service of plate"! !

Great minds make their representatives great men, but to be supremely great in America, in its present mood, the man must have not a great brain, but a great glutæus maximus; or a gastrocnemius; or a biceps.

The young men of this country read in all the papers, that if any one (who might in vain cudgel his brain for a thought) can shoot more pigeons from a trap, or hold a steadier billiard cue, or pull a stronger oar, or break down his fellows in a brutal walk, he is petted, honored, fêted ; but if one be a leader in history, or poetry, or elocution, or with the pen, or in law, theology or medicine, he may live unhonored, and die unsung! The public will uncover before a brutal pugilist, but will snub an erudite lawyer or a learned physician.

Such is the public estimate of mind and muscle. It is a great country, but it will, some day, be greater.

The Philadelphia Medical Times, in its issue of March 12th, makes editorially a very comic, blundering and apologetic explanation of the editorial on "Alumni Associations" which appeared in its previous issue, and which was mildly criticised in the February number of this Journal. In that very remarkable and transparent editorial, it will be remembered that its author, who is a teacher in the Medical Department of the University of Pennsylvania, lampooned the Jefferson Medical College, as an "Institution holding a position so well known, that it is not necessary to specify it," recommending that its Alumni Association should obtain representation in the Board of Trustees of the College and "so assert itself" that the Jefferson should no longer "discharge into communities large numbers of men (graduates) with but a show of regard to qualification." In the apologetic and explanatory editorial *last* issued, its author declares he has refrained from speaking plainly of the Jefferson Medical College "for reasons that are obvious;" that is to say, it would, in his judgment, be coarse and suspicious under the circumstances for him to do so. How far his previous and his present views on this subject harmoize and are consistent, he and his readers can easily determine; it would have been better though for his present judgment to have been originally entertained, and not to be regarded as evidence of compulsory though very proper reformation. However, all has been accomplished by this Journal that it sought to accomplish, and it accepts as its guide the charitable philosophy of the poet who declares that

> "A fault which is confessed,
> Is a fault half redressed!"

And if the explanation of the *Times* is blundering and amusing, the apology will be accepted by the public on account of the reformatory spirit which dictated it.

The editor of the *Times* says, "Medical Journalism in this country is at present not sufficiently well paid to afford a livelihood;" this is an error, for there are several Medical Journals in this country whose editors from this source alone enjoy liberal incomes. If the *Times* is unfortunately and confessedly not in this catagory, it would soon be placed therein and become influential, if it were less clamorous in behalf of the University of Pennsylvania, and less denunciatory of rival institutions.

PRESCRIPTIONS.—It is amusing but depressing to see the exchanges filled with prescriptions, and "looking for all the world" like so many patent medicine almanacs; a prescription for "a cold"; for "diarrhœa"; for "a cough"; for "metrorrhagia"; for "throat affection"; for "pneumonia," etc., etc. It is pitiable indeed. Age, sex, climate, season, stage of the disease, diathesis, cause, etc., all repudiated. It is medicine, as fools and the general public look upon it; a set of recipes, such as a stupid old farmer would collect for his sick mules and farm stock; medicine stripped of all the associations and rules of scientific teaching!! This is a disgrace to Journalism and to the medical profession.

ACUTE SCROFULOUS MIXTURE.—There was published in this Journal an excellent prescription with this title; when the title should have been of course, "anti-scrofulous mixture." The exchanges have generally copied the prescription, without credit, and as they have in every case the same error in the caption, there can be no doubt as to the source from which each Journal obtained its information. Is it not always better to give credit than to have the failure to do so, and a blunder in addition, comically exposed.

WHAT A SPECIALIST SHOULD BE.—A Specialist, in medicine, should be like Lord Bacon's clever man in literature; "one who knows something of everything, and everything of something."

THANKS are due, and are with pleasure tendered to Drs. R. Joy Jeffries, Boston, Mass., Paul F. Mundé, N. Y., and Samuel H. Russell, Boston, Mass., for calling attention to the error which the London *Times* made, and which this Journal copied, in mistaking Dr. Lyon Playfair, LL.D., for Dr. Wm. Playfair, M.D. The mistake occurred in the anecdote published on page 191 of the last number of this Journal.

GAILLARD'S MEDICAL JOURNAL.

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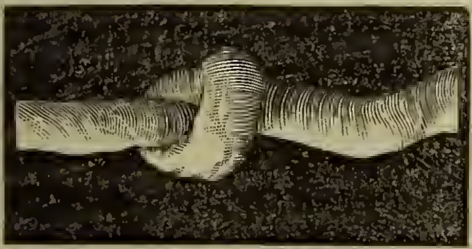
Knots in the Umbilical Cord. By J. H. POOLEY, M.D., Columbus, O. Lecturer on Surgery in the Columbus Medical College,

On the 12th of October, 1880, I was called to attend Mrs. B——, aged about 35, mother of a large family, who miscarried at about the end of the fifth month of pregnancy. The child was dead, and the umbilical cord which was a long one, was tied about its middle into a tight knot, which I believe to have been the cause of the child's death, and therefore of the miscarriage. I did not notice that there was any unusual quantity of liquor amnii present.

I give here a photographic illustration of this knot.



This being the first case of the kind that has occurred in my practice, I have been led to examine a little into the literature of the subject, and the results of that examination it is my present purpose to lay before the profession. My research into this matter is very far from being a thorough one, as I have had neither time nor facilities to make it such. The questions that present themselves in this inquiry are first the frequency of its occurrence, second, its cause, third, its influence upon the life and well being of the fœtus; and if in the course of our investigation some collateral points are touched upon, I trust it will not diminish the interest of this short paper. Without further prelude I will now proceed to display my authorities, first, from text books on obstetrics, second, from communications in medical journals, and then point out the conclusions they seem to indicate.

First, then the text books; their notices of this subject are very short and unsatisfactory as far as I have looked into them, though I have examined only a few. Playfair says, Treatise on Midwifery, p. 107, "Distinct knots are not unfrequently observed in the cord, but they rarely have the effect of obstructing the circulation through it. They no doubt form when the fœtus is very small. They may sometimes also be produced in labor by the child being propelled through a coil of the cord lying circularly round the os uteri. The so-called false knots are merely accidental nodosities due to local enlargements of the vessels."

Baudelocque, says, Midwifery, Dewees' edition, p. 153, "The length of the cord varies very much, but it is commonly from twenty to twenty-two inches; the two extremes which I have seen, have been from six to forty-eight inches. There has since been seen another cord, of fifty-seven inches, forming seven turns round the child's neck. M. L. Heretier, master in surgery, was witness of this fact at the Hotel Dieu of Paris. The cord from its great length sometimes gets tied into one or more knots. These do not prevent the ordinary development of the fœtus, nor occasion its death as has been imagined by some."

Ramsbotham says, "The cord varies much in length, in some instances not exceeding six or seven inches, in others being more than five feet. Sometimes the funis is found in labor to be twisted into a loose knot, but this appears to me to be produced rather by the movements of the fœtus in utero, than to exist as an original conformation."

Process of Parturition, p. 82, Burns says, "When it is too long, it is often twisted round the neck or body of the child, or occasionally has knots formed on it, (Mauriceau, Obs. 133–156) most frequently perhaps, by the child passing through a coil of it during labor. Dr. Hunter thinks he has seen these formed previous to birth."

Churchill, in his Midwifery, Am. Ed. p. 120, has the following remarks, "The length of the cord varies much; it is very rarely less than eight inches, though some such cases are on record, and it is sometimes five or six feet long. Out of 500 cases, selected from the writings of Oriander, Adelmann, and Heune, with some additional measurements of my own, I find the most common length to be eighteen inches; none were under twelve, nor above fifty-four inches. In ordinary cases the funis lies free and loose in the cavity of the amnion, above the head of the child; but occasionally owing to the movements of the child at an early period, it may be coiled round its neck, *tied in knots*, or escape below the head, so as to prolapse during labor. The circling round the neck happens about once in nine or ten cases, or according to the examples I have collected, 204 times in 1,920 cases. The cord may be so much twisted (at an early period) as to diminish the calibre of the vessels, and to impair the nutrition of the embryo."

"The space between the vessels is filled up with a gelatinous mucus contained in cells, which prevents any obstruction to the circulation of the blood from accidental compression, or even when a knot is casually made in it by the irregular changes of the position of the child. It is sometimes over six feet long." Denman's Midwifery, Francis's edition, p. 213.

Leishman, Midwifery, p. 112, says, "When the cord is too long, knots have frequently been observed on it. These are doubtless due to the movements of the fœtus, and are much more likely to occur, if along with great length of the cord there is an excess of the liquor amnii. It is easy to understand how under such circumstances, the fœtus might float through a large loop, and a knot be the immediate or ultimate result. It is conceivable that danger might result from this, in the course of labor, should any mechanical complication tend to draw the knot tighter, but all experience seems to show, that these knots are not to be looked upon as dangers, unless under such very exceptional circumstances."

So much for the text books; let us now turn to the experience of the profession as recorded by writers in the various journals, from which we shall see that knots are by no means so frequent as the text books would lead one suppose.

Dr. Philip Leidy, of Philadelphia, records in the *Medical and Surgical Reporter*, May 9th, 1868, Vol. 18, p. 402: The case of a healthy woman, aged 30, who was delivered at full time of a child which, from the appearances presented, he thought had been dead about four weeks. Male, weight, seven pounds. Upon examination he found the umbilical cord, "near the fœtal end, tied into a knot, and no circulation between that and the placenta." He remarks, "I have only one cause to assign for the death of the fœtus; at some time during the intra-uterine existence, the fœtus in its movements entangled the cord, though the entanglement did not at the time interfere with the umbilical circulation, as the cord increased in size, the calibre of the umbilical vessels was infringed upon gradually, until the circulation was cut off entirely, which in my opinion took place three or four weeks before delivery. If any other reasonable solution can be given I should like to be informed.

"Notwithstanding the statement of nurses and even physicians, that they have seen many cases of knots in the cord, the fact appears to be that the so-called knots are in the majority of cases nothing more than simple projections on the cord formed by the vessels, cellular tissue and membranous sheath or prolongation of the chorion. Among the answers to an inquiry on this subject in the *Medical Press and Circular* we need quote only one, that of Dr. Redman, who states that during a period of forty years medical practice, in which he attended nearly 10,000 cases of midwifery, he had met with only four cases in which a knot existed. In each case the presentation was natural and the cord unusually long (exceeding four feet), and with one exception encircled the neck."—Cin. *Lancet and Clinic* March 20th, 1880, p. 274.

Dr. C. Waters, of Maryland, in *Am. Jour. Med. of Sciences*, October, 1845, p. 358, has some remarks and cases. Knots upon the funis umbilicalis have been noticed and regarded as a cause of danger to the fœtus in utero, or at the time of birth. Dr. Waters observed three cases within a few years, and is disposed to regard the occurrence as more frequent than is usually supposed. Mrs. —— in labor with her third or fourth child. The labor was natural and quick; the infant was a large female. The cord was tied in a knot about a foot from the umbilicus, and the noose was drawn tightly as it could be without interrupting the circulation. Mother and infant did well. Mrs. —— in her second labor. The cord being drawn tightly about the neck of the fœtus, Dr. Waters drew it downwards over the head before the child was delivered. The funis was very long, and tied in a knot. Mother and infant did well; but at the moment of delivery this knot was so tight that pulsation in the cord was very feeble and slow, and the child made no effort at respiration. On loosening the knot and applying a stimulant to the surface, the pulsation grew stronger, the child breathed and was soon removed. The infant was a large female. This case suggested the propriety of examining the whole length of the cord in all cases of still-born infants. Had the knot not been detected and loosened this child would perhaps have been lost. Dr. Waters does not recollect having heard or seen the propriety of this examination suggested by any one. Mrs. —— in labor; the mother of a numerous family. The funis was drawn around the fœtal neck, and Dr. Waters gently removed it before delivery was completed. The cord was about two feet nine inches long, and there was a knot drawn pretty tightly, but not so as to interrupt the circulation, about two and a half inches from the umbilicus, the infant was a healthy girl, and with the mother did well. All these cases occured in the humbler walks of life and the patients were in the habit of taking much active exercise."

Mr. Beale, in the *Medical Circular* has the following, I quote from the Ohio *Medical and Surgical Journal*, November, 1857, p. 157, "On looking over a record of midwifery cases attended by myself I was astonished at the number of times in which the umbilical cord was found encircling the neck. In 1,220 cases, it was once wound round the neck in 175, twice round in 32, and thrice round in seven cases. In one case the cord was crossed over the chest and back, and looped under both axillæ; measured fifty-eight inches in length. In three cases there was a single knot on the cord, and on one funis were two knots.

Dropsy of the cord occurred once, increasing its breadth to two inches, and rendering it very tortuous. The shortest cord was five inches in length. (In Dr. Rigby's Midwifery, there is mention of a case in which it was but two inches long, and another in which its length was 61 inches, vide p. 182.) I did not notice any unusual retardation in the labors of those of my cases to which I have referred, only more or less lividity of the neck and face, according to the time spent in the head passing into the world. These cases give as the average, about one in five in which the cord is so coiled." The reader will recollect that Churchill, as quoted above gives it as one in nine or ten. Mr. Beale goes on to remark, "It seems surprising that in cases of alleged infanticide the plea of death being caused by the pressure exerted by the funis (without help) has not been seized upon to any extent by the counsel for the defence, for such a liability must tend to diminish the chances of life." This plea has been put forward. and in a certain case which was given to the celebrated Negrier to examine he made an elaborate report, from which I quote the following portion from the *Annals d'Hygiene Publique*, January, 1841. "The conclusions are drawn from the examination of 166 cases. Of these it was remarked that in 144 the umbilical cord floated free within the uterus; in twenty cases it was rolled around the neck of the child; in one it was round the shoulders; and in one between the thighs, the breech presenting in this case. Ninety-eight of the umbilical cords were not varicose, and sixty-eight were varicose. As to length, twenty-eight were 17 inches long, 112 were from 17 to 25½ inches long, and twenty-six were above that length. He also made some experiments as to the resistance of the cord, and found that the varicose cords were the weakest, and generally gave way at one of the varicose dilatations." The average resistance of the umbilical cord was thirteen pounds. As a practical conclusion he says that the cord is generally both long enough and strong enough to produce strangulation in the new born, or incompletely born infant, by being twisted around its neck.

Further, on the length of the cord, we find that Dr. Tyler Smith exhibited to the Westminster Medical Society, January, 1850, a funis which measured fifty-nine inches and a half in length; and on the other hand Mr. J. B. Thompson relates in the London *Lancet*, June 4th, 1842, a case in which the funis was only seven and a half inches long Mr. Stone has met with a case in which it was still shorter being only six inches, and Mr. William Collyur, *Provincial Medical Journal*, August 6th, 1842, another in which the funis was scarcely that length. But probably the extremes in this respect are to be found in L'Heretier and Schneider who report a length of over nine feet, and the sessile placentæ mentioned by Selafer. Of the possible ill effects of a very short cord the following seems to be an example from the *Lancet*, 1846, Vol. 2, p. 49, in a letter to the editor:

"Sir, I was summoned to attend M. B., aged 27, mother of four children, never having miscarried. On my arrival, I found that she had been in pain, since 2 o'clock in the morning, (it was then 8 o'clock, A. M.) and that flooding had come on before, and had increased during the pains. She was in great agony, on account of an intense dragging pain, situated and referred to the right iliac region, which dragging sensation she had been troubled with during nearly all her pregnancy. There was a great quantity of blood in the bed, and she was very faint. On examination, I found the os uteri fully dilated, and the feet presenting· Slight friction over the abdomen excited the uterus to contraction, and in a few minutes, a seven months fœtus (dead), was born, the placenta being thrown off and expelled by the same pain. On measuring the cord it was found to be only five inches in length, and to the shortness of the cord, doubtless, the sensation before mentioned might be referred, the detachment of the placenta accounting for the hæmorrhage.

I remain, sir, yours truly,
JOHN S. BEALE, Student."

But these are digressions, into which our subject has almost naturally led us, and which we anticipated in the beginning of this paper, let us return to knots in the cord. At a meeting of the New York Pathological Society held April 14th, 1869, Dr. Nolan presented a portion of a funis, which was twenty-four inches long, tied in quite a firm knot. The mother was not preternaturally large, and the child was born alive. Dr. Jacobi thought, from the appearances presented, that the cord had become tied late in gestation. Dr. Rogers was of the opinion, inasmuch as some evidences of adhesion were present, that a little time at least had elapsed before delivery. In Leonard's *Illustrated Medical Journal*, for April, 1880, Dr. E. P. Christian, of Wyandotte, Mich., gives an account of a knot in the umbilical cord illustrated by a rude woodcut. As his account is short, and not without interest, I will quote it entire: "At a recent meeting of the Wayne County Medical Society, I presented a section of an umbilical cord containing a knot, and stated that it occurred in a patient who was confined about seven weeks ago. The knot was about three inches from where the cord was severed, next the infant. The woman's labor was natural and the child born living, somewhat asphyxiated, but restored without much difficulty. The supposition is, that in utero the cord was a loose loop and was drawn tight into a knot during the expulsion of the child. The total length of the funis was twenty-six inches, but there was a circumvolution about the child's neck which reduced the free length to perhaps eighteen or even seventeen inches. This condition, it s possible, may exist oftener than is commonly supposed, though it is the first case of the kind which I have observed."

We must, in our consideration of this subject distinguish between true and false knots as they are sometimes called. These latter consist of certain nodosities of the cord, which though knot-like are far from being really knots; they consist of certain varicosities of the vessels, which as we have seen are quite common, local accumulation of the Whartonian jelly, etc., but the most curious appearance of this kind on record is the following.

At a meeting of the Medical Society of London, Feb. 7th, 1852, "Dr. Crisp exhibited a portion of an umbilical cord, in which two loops were firmly adherent—a union that must have taken place at an early period of growth. The mother a patient of Mr. Skegg, of St. Martin's Lane, was thirty-three years of age, and generally healthy; the labor, the first, was protracted, the child's face being towards the pubis; delivery was affected by means of the forceps. The child was well formed, and of the average size; it lived about half an hour, the death probably being occasioned by the pressure of the head.

Dr. Murphy said the specimen was rare, if not unique, and requested Mr. Streeter to favor the Society with his opinion of the specimen which had been exhibited by Dr. Crisp. Mr. Streeter considered it as a rare, if not unique, specimen, for he had never seen nor heard of one like it. He trusted Dr. Crisp would first inject the vessels of the loop, and then examine even with the microscope if necessary, the nature and extent of the agglutination of the fold.

This was necessary to determine whether the two amniotic and the two proper thecal layers were simply adhering, or whether the four had coalesced and become one inseparable membrane at the point of apposition." From all that we have seen we are entitled to conclude that knots in the umbilical cord are rare, though it is curious to notice that several of the reporters though they have only seen one case, or a few in a great many deliveries, speak of it as probably more frequent than is generally supposed.

We have no data from which to decide the frequency of this occurrence. Dr. Redman we have seen met with it only four times in 10,000 cases, or once in 2,500, while Dr. Beale found it present four times in 1,220 cases, or once in 305. Taking both these gentlemen's statistics together we find that it occurred 8 times in 11,220 cases, or once in 1,402½ but the figures are far too few to be of much use, and I do not know of any others.

Two knots on the cord are very rare, Beale met with it once, and Saxterph of Copenhagen, reports a case; I have found no mention of more than two knots existing in any case.

The knot has generally been found on the umbilical half of the cord, and often within a few inches of the child's navel.

We do not know that the sex of the child has any influence in the matter, in fact it is not generally mentioned at all; in all of Dr. Water's three cases, the child was of the female sex, but we are not from this entitled to conclude that females already exhibit in utero those saltatorial or terpsichorean propensities for which they are distinguished in after life.

The cause of these knots is mainly length of the cord, combined in some instances with excess of the amniotic fluid, though in many of the cases this has not been noticed. These knots, when formed early in uterine existence, are clearly capable of interrupting the circulation, and terminating the life of the child; when formed at a later period they are not dangerous, except they be very strongly dragged on during the progress of labor. On this point, Whitaker in an excellent and elaborate monograph on the Morbid Anatomy of the Placenta, remarks: "It is scarcely possible with the greatest force to make a permanent real knot artificially in the cord at term. This is confirmed by the fact that infants born dead from knots in the cord are always premature, and the knots themselves contain none or very little of the protecting gelatine."

In addition to causing death by interrupted circulation, the knot may enclose portions of the fœtus, and thus become one of the causes of intra uterine amputation, of which Montgomery has given many interesting examples. Playfair in his System of Midwifery, p. 227, seems disposed to throw doubt on this, by what appears to be a very trifling objection; he says, speaking of intra uterine amputations:

"It has been supposed that the umbilical cord might, by encircling the limb, produce a like result. It appears doubtful, however, whether this cause is sufficient to produce complete separation of the limb, as any great amount of constriction would interfere with the circulation through the cord." But facts are better than theories, and we may refer to the following, and others like them. Dr. Beatty exhibited to the Pathological Society, of Dublin, a preparation of a fœtus of between the fifth and sixth months of utero gestation which he adduced in confirmation of the fact several years ago described by Dr. Montgomery, the spontaneous amputation of the limbs before birth. This specimen illustrates that process, and may help to explain why the fœtus is so often found maimed before it arrives at its full period. The left arm in this instance had been enveloped in a coil of the umbilical cord, which had so tightly constricted it as to cause the absorption of all the tissues with which it was in contact; this had occurred about the middle of the humerus and the soft parts being removed, only the bone preserved the continuity of the limb.

Dr. D. T. Gilliam, then of Nelsonville, Ohio, now of Columbus, communicated to the Cincinnati *Clinic* for Nov. 16th, 1872, a case in which the left leg of a fœtus was all but severed from the body by the pressure of the umbilical cord, which though not tied in a knot partially enveloped it, like a ring, and had produced absorption of the tissues down to the bone.

Another peculiarity of the case was that this child had two umbilical cords, but unfortunately the particulars as to the insertion of these two cords both to the child and the placenta, are omitted.

Electrical Force in Man and Nature.

By JOHN J. CALDWELL, M.D., Baltimore, Maryland. Honorary Member, College of Physicians and Surgeons, Baltimore; Gynæcological Society, Boston; Abingdon Academy of Medicine, Va.; Late Surgeon Brooklyn Dispensary, and U. S. A.; Member, Amer. Med. Association; Med. and Chirg. Fac., Baltimore; Med. and Surg. Society, Baltimore; Kings Co. Medical Society, Brooklyn; Electro-Therapeutical Society, N. Y.

The wires that prevade Ocean, Ether and Land
Are the chains that bind Nations together.

All phenomena of the organic or inorganic world, are now being interpreted in terms of *matter*, *motion*, and *force*. The pilot-idea of the doctrine of evolution to-day is, that every thing proceeds from the simple to the complex, and that, back of all the manifestations of matter and of mind, there lies "unity of force." It is this acting, living, persistent principle, which constantly sits at the loom of time, and arranges the position and the texture of the threads, that make up the web of things. This ancient weaver called "Force," has received many different names. When it works among molecules, we call it cohesive attraction. When it works among the ultimate atoms, building them up into the delicate and beautiful crystals, we call it the crystalizing force. When engaged in uniting kindred atoms, we call it chemical force, or chemical affinity. Our meaning, however, is sufficiently indicated without further extension of the list of forces.

Nature delights in prodigality of results, but she is parsimonious in the number of her working powers. Given a little matter and motion, and she will construct a world. The lines of force radiate in all directions, always acting; always persistent. Difference of result is but the product of the same force, differently conditioned. A tree and a mammal betray the same parent Force. In the ultimate analysis we reach simplicity of cause, and "unity of force." Verily there is "unity in variety and variety in unity." All that science can do, armed and equipped as she now is, if truthful to her high calling, is to recognize the great fact, that back of all the working energies of nature there lies the light of a universal intelligence; so guiding, controlling and compounding the manifold manifestations of "Force," as that the final outcome of all shall redound to the best good of the creàture and the everlasting Glory of the Creator.

We have, thus, in a general way, indicated the essential unity of "Force," and the great diversity of its results. But here we must stop. What force is, *per-se*, we know not. We can only watch the play of its untiring activities throughout the realm of nature:

Mysterious essence ; vital Force ;
  We fain would all thy secrets know,
Would find at last the hidden source,
  From whence thy powers doth ever flow.

But ours, alas, is finite sphere ;
  A larger vision by-and-by,
May-be, will solve what puzzles here ;
  Till then on trusting faith rely.

Perhaps one of the most impressive instances of the play of force, is to be seen in the phenomena of light. Light is but a result of the rapid oscillations of the ether waves. Hundreds of millions of these waves strike the retina per second before we are conscious of the sensation of light. How this sensation is translated into consciousness, is a mode of force of which we know nothing. One fact, however, has been determined, viz.; that color is a result of motion. Less rapid oscillations are required to produce in us the sensation of the red in the spectrum, than of the violet. Electric light which is the most intense of all light, is but a product of exalted motion. This can be beautifully illustrated by suspending a rod in a darkened room, with machinery attached, so as to increase its motion at pleasure. A certain degree of motion produces sound; this motion increased, produces heat, a further increase produces all the colors of the spectrum in their regular order. Still exalting this motion, we obtain Electric light.

What more beautiful demonstration of the unity, and yet diverse action of motion, which is only another name for force. But it were useless to give, in detail, even a tithe of the protæan results, of this silent and unobtrusive energy.

Force being persistent must always act; it must produce results. Harmony in result implies harmony in the conditions under which force is brought to act. Want of harmony in result implies a want of harmonious conditions. Hence what are called freaks of nature, monstrosities, and all forms of diseased action.

The theory of wave motion in the ether had its origin in the wave motion of water and atmosphere. The ear sustains the same relation to *sound*, that the eye does to light. There is a close analogy between the harmony of sound, and the harmony of color. The rhythm of sound has its unvarying conditions in reference to the human ear. Atmospheric vibrations, when they exceed a certain number per second, lose their individuality and become merged into a hum or indistinct sound. The auditory nerve is finely adapted to take in the whole range of the gamut. Sounds, higher or lower in either directions, cease to be distinct. It matters not from whence we take our illustrations of the "Play of Force," we still find it, in the ultimate analysis, persistent, and a unit. The harmony of the universe is every where apparent. Order, design, adaptation and law, are every where discernible. Force reigns supreme. Its workings are written in living light throughout the organic and inorganic world. It flashes in the light and glows in all the colors of the spectrum. It proclaims itself in all the harmonies of sound, and in the most complex workings of the brain. Space, boundless, ever reaching space, is its workshop. And time, never ending time, is constantly recording its mighty results.

It remains to say a word in reference to the more *special* manifestations of Force. The human system supplies the most appropriate example. From the persistence of Force, we can but conclude that between the mind and body, there is the closest relation, sensation, thought, and our most involved sentiments, imply the destruction or waste of the gray tissue of the brain molecules. This waste is only another name for one mode of the "Play of Force." In a word, Man as he is, is but a product of Force, acting in the first instance on a germ hardly microscopic, and mind, with all its wonderful and complicated powers, is evolved from the simplest beginings. A Raphael, or a Newton are evolved, in common with the lowest order of animal life, from the product of the same Force, controlled and governed by the same law which has its fitting conditions and relations. Want of harmony in these, as we before remarked, implies want of harmony in result. A healthy mind, healthy morals and a healthy religion, are the resultants of the unimpeded action of Force.

A knowledge of the brain and of the net-work of the nervous system is essential to every educated Physician, who would minister to a body, or to a mind diseased. The ability to maintain a proper medium, through the exaltation or depression of nerve power is requisite to him who would understand correctly the nervous system. Her path to universal empire, will continue to be, as it is now, dotted all along with rejected theories. She is now making rapid strides, and has indeed become an ocean of truth. Let us keep abreast, at least, of that portion of its mighty tide which is now carrying the science of medicine onward, far onward beyond its ancient land-marks; enriching it with new truths, and ennobling it with new laurels.

Just how Electricity acts as a Therapeutic agent, no experimenter has satisfactorily explained, though learned minds, at home and abroad, have elaborated ingenious, erudite theories, simple and complex, still we will maintain our text, "The unity of Force." We will again note that Electricity is but another name for the most exalted motion known to the human intellect. We will then be able, in some degree, to comprehend its action upon our bodies, and its true place in medicine, and how it acts through the brain, and its infinite ramifications.

Nerve velocity is 60 yards per second.
Sound velocity is 332 yards per second.
Cannon Ball velocity is 550 yards per second.
Light velocity is 360,000,000 yards per second.
Electricity velocity is 450,000,000 yards per second.

With armies of signs I have girdled the world,
I am felt in the words they indite ;
They move on their way with no banner unfurled,
With a speed that is greater than light.

Hence it can be readily understood, how Electricity's direct action may accelerate our natural forces; how its reverse action may depress them, how its chemical action may dissolve or electrolize morbid growth. How we may dilate the vascular system, or accelerate the vaso-motor, and how through the sympathetic system exalt the trophic powers, or produce inhibitory action.

Man still remains unsatisfied,
Still strives to mend his state.
What ! though the months are changed to days
When speeds him on his distant ways,
Impatient, still, at times delays,
He never learns to wait.

And only when the lightnings flash
Submissive owns his power,
And, humble as a cringing slave,
Bridges for him the Atlantic wave
He rests a single hour ;
When Volta's pile and Franklin's kite
And Morse and Henry all unite
To give imperial sway.

The attention of Electricians was concentrated upon Electro-Physics until the perfection of the mechanical contrivance by Morse. In due time it was known to the medical profession that electricity was a powerful therapeutical agent, and its application in the treatment of diseases wrested from the hands of quacks and charlatans. Electro-Therapy is now an important specialty in medicine. The close analogy of electric to nerve force at once caused attention to be directed to its employment in the treatment of nervous diseases; but experiment has shown that it is applicable to the treatment, the relief and cure of other pathological conditions. Thus it may be used as a tonic in cases of nervous debility, in cases of paralysis, so as to take the place of nerve force which presides over functions of nutrition. The nutrition of the paralysed limb is thus sustained, and likewise the revival of nervous energy promoted. It is apparent from the close analogy of electricity to nerve force, that this agent embraces a wide range of morbid conditions. Through the nervous cords which act as conductors, every part of the animal organism can be reached. In this way secretion and elimination of morbid products may be promoted, and the organ or apparatus restored to healthy action. The three great forces of nature are heat, light, and electricity. These are the forces under whose influence vegetation is produced. Heat and moisture cause the germ of life in seed to awaken, the materials stored up for the use of the embryo undergo changes both chemical and mechanical, so as to be fit for appropriation. The architecture of the plant begins. A spire shoots up from the bud, under the influence of the sun's light, the food afforded by the atmosphere is appropriated. Forces are active at the root, forces are active in the blade. There is no doubt in my opinion that electricity is one of the active forces which contributes to plant growth. We have all the conditions of its generation, heat, moisture, unequal heating of different mineral substances, causing thermo-electricity. We also have chemical action. It is impossible to draw a line of demarcation between vegetable and animal structure, and doubt not that heat, light and electricity are the physical forces under which animal structure is built up. The light of the sun is as necessary to the vigor and health of the animal, as of the vegetable kingdom. Indeed, as already stated, the two shade into each other so as to render it impossible to say where the vegetable ceases, and the animal begins. Electricity being one of the forces which contributes to the animal organism, is necessary to functional health.

The various conditions under which electricity is manifested enable us to apply it to a variety of morbid conditions. Its wonderful decomposing power (electrolysis) has been utilized by the physician. The intense heat incident to its manifestation by certain combinations, has enabled the surgeon to substitute in many cases the cautery for the knife, indeed to apply it to the section of morbid growths not remedial by the knife.

It may be stated in order that progress shall be had in any branch of science, appropriate apparatus is necessary. Scientific speculation is a great lever, but it must be controlled by experiment, speculation must be tested by experiment, for the human mind is too apt to be seduced by the pleasures of speculative philosophy, and too prone to abandon the paths of observation and sound induction.

From the want of apparatus and the ignorance of its different modes of manifestation, electricity as a therapeutic agent was seized upon by the charlatan, and neglected by intelligent practitioners of medicine. By a curious coincidence the discoveries in electric science and improved apparatus was accompanied by great discoveries in regard to the functions of the nervous system. Whilst Oersted, Ampeere, Faraday and others were making rapid strides in electric science, Sir Charles Bell, Magendie, Marshall Hall, Claude Bernard, Brown-Sèquard and others were unravelling the intricacies of the nervous system. In no era of the world has there ever been such activity in scientific investigations, and the applications of science to the material comfort and welfare of mankind.

At last the votaries of medicine contribute their quota, and many of the most eminent of the profession are devoting their talents and energies to the therapeutical effects of electric force in the treatment of disease.

We have been induced to try the effects of electricity in cases of suspended vital function resulting from narcosis, and cases of apparent death from drowning, from experiments upon living rabbits, made by Dr. Wilson Phillips, of England, from which it appears that electric force was used to substitute nerve power. The pneumogastric nerve of the animal was severed immediately after it had eaten some parsley. After the death of the animal, which had great difficulty of breathing, and perished apparently from suffocation, the stomach was opened and the parsley found undigested. A similar experiment of section of pneumogastric nerve was made, but a current of galvanism passed along the nerve, and continued for twenty-six hours. No difficulty of breathing occurred as long as the current was kept up. The animal was killed, the stomach examined, the parsley was completely digested. It thus appeared that galvanic energy is capable of supplying nervous influence in that the process of digestion may be carried on. Similar experiments were made upon dogs with like results.

VASO-MOTOR, OR FORCES OF THE CIRCULATION.

The following experiments by Drs. Bowditch and Minot illustrate the influence of anaesthetics on vaso-motor centres.

Anæsthetics in producing insensibility have accomplished such results by antagonising the effects of irritation of sensitive nerves. One of the most constant physiological results of irritation of a sensitive nerve is a rise of arterial tension, due to a reflex stimulation through the vaso-motor centers of the muscular walls of the smaller arteries, especially those of the intestines. It is ascertained that in the majority of cases, the rise of blood tension consequent upon the irritation of the saphenous nerves, is less marked when the animal is under the influence of ether, than when the anæsthetic is not used. The first object was to determine the effects of anæsthesia on the reflex rise of the blood tension. This was accomplished in the following manner: An animal being placed on the operating table in the supine position, a solution of curara was injected into the jugular vein, when paralysis ensued. When the respiratory movement ceased, the trachea was connected by means of a glass canula inserted into it with the apparatus for artificial respiration, which was so adjusted as to imitate as closely as possible the normal respiratory rhythm. A canula was then placed in the carotid artery and connected with a mercury manometer, carrying a pen by means of which the blood tension was recorded on a long strip of paper, which was kept in uniform motion by clock-work. The saphenous nerve was then placed upon electrodes. The irritation of the nerve was produced by closing the currents, by means of a key provided with a pen, thus recording the blood tension, which could be seen at a glance. After the anæsthetic had been administered the nerve was again irritated. Then the blood tension was notably decreased, and so continued to be as long as these experiments were tried. But far more constant and obvious were the results obtained from chloroform. Here the irritation of the saphenous nerve caused a less marked rise in the blood tension, and sometimes there was no rise whatever. These facts present to my mind the clearest evidence in favor of the electrical remedy in cases of deep chloroform toxæmia, and the propriety of having accessibility to a Faradic instrument, complete and ready for immediate use in chloroform administrations.

E. du-Bois Reymond, "first succeeded in demonstrating the presence of specific muscle and nerve currents by deflection of the magnetic needle." He likewise ascertained that, "if the muscle or nerve be excited by electric currents, or by mechanical or chemical irritants, so that the first is physiologically active, and the latter caused to contract, and then placed at two symmetrical points in connection with the galvano-multiplier, a less deflection of the needle is produced than when the nerve or muscle is in a quiscent state. This is called the negative variation of the current." The conclusion arrived at by Dr. du-Bois Reymond was, that nerve and muscle contain innumerable positive and negative electric molecules which move with great regularity throughout the tissue. Perchance the power of electricity in cases of suspended animation is to restore the suspended electrical forces of the body to a normal condition, and thus reanimate failing vitality.

The effect of chloroform may be remedied in much the same way; that is to say by appealing to the vaso-motor centres through the pneumogastric axis.

No nervous centre can act of its own motion or originate action. It must be excited to action. We might as well speak of sight without the action of the waves of the luminous ether, or sound without the vibration of sonorous substances. In investigation medicine has called to her aid other physical sciences. Natural philosophy has furnished the explanation of the mechanical contrivances, and we look to mechanics, hydraulics, and pneumatics to aid us to interpret the phenomena of locomotion, circulation, and respiration. It has furnished in electricity the probable means of interpretation of the force which operates the mechanism, the phenomena of nerve power; she has furnished the microscope to enable us to see things invisible to the naked sight, whilst chemistry has laid before us the knowledge of the fluids of the body, and enabled us to solve the mysteries of digestion. These sciences have been called the handmaids of medicine, they are in fact parts of the whole, without them no physiology, without physiology no art of medicine.

But with scalpel, microscope, and chemistry we fail to delineate the anatomy of the nervous system. It is a truth that, that which is, is but the sequence of that which was. The results of to-day could not be had without the investigations of yesterday. In like manner will the knowledge of to-day be the basis of the conclusions of to-morrow—such is the law of intellectual development—such is the sequence of scientific advancement. Sir Charles Bell first showed that the nerves of the human organization are distributed with regularity. It is the basis of the physiology of the nervous system. He first called attention to the functions of the spinal nerves, pointed out their different structures, and their different functions; distinguished the sensory and the motor. Marshall Hall succeeded Bell, and we had his excito-motor system. Others succeeded Hall to explain nervous phenomena, among whom stands preeminent the great Claude Bernard.

But we owe more to Marshall Hall than the explanations he has given of nervous phenomena. He demonstrated that when the scalpel and the microscope fail, to determine its anatomy, we can yet map out the anatomy of the system. A physiological fact is as certain an indication of nervous distribution, as though we could follow its ramifications scalpel in hand, or microscope to eye. Observation and experiment is the thread which leads out of the labarynth, without which we must be lost in its intricate mazes. Marshall Hall has given us a map of the excito-motor system of nerves. Bernard has shown their peripheral distribution. The functions of the brain and spinal marrow are to be laid before us by pursuing the same line of investigation. By experiment. The number of devoted investigators give an earnest promise that the science of life may yet be illustrated, that the opprobium that medicine is only an empiricism may be expunged, and that the day will yet arrive when medicine will be practiced upon laws or principles known and recognized.

The whole forms a beautiful piece of mechanism, whereby under the orders of certain nerve centres it is set in motion. Blood flows in by the arteries regulated by the vaso-motors; the veins receive it, and dilate under the direction of the vaso-dilators; the muscular bands are brought into play by the nerve power conveyed to them, the result being what we call full nutrition. When nerve power is exhausted, or its exaltation diminishes, muscles relax, veins contract, the parts are freed from blood.

As a typical illustration of involuntary force we will cite its influence on the heart's action—say for seventy years—and, for convenience fix the pulsations at sixty per minute. Then we will have the proposition of 60x60 = 3,600 beats per hour. Again 3,600 multiplied by ten equals 36,000 beats in ten hours; or in the words of the learned Draper, this little organ can execute "three thousand million beats without a stop; and propel a half million tons of blood, and momentarily wasting, repairs its own waste all this time."

The mathematical rhythm of four moving cavities, the perfect closure of its mitral and semi-lunar valves, and the regurgitating play of its tricuspid, have never failed. Much more could be said of other vital organs, under the control of the involuntary force. In the face of all these facts, how strikingly true is the saying, "How fearfully and wonderfully we are made," for, in regard to the heart, we have but to note that its nerve supply springs principally from three little ganglia, and a few nerve fibres originating from the brain, spinal cord and sympathetic.

How delicate the source, how fragile and thread-like the conductors; how readily implicated, how sudden and certain the result. Yet, in death from such a cause, how obscure the character of the lesion:

"There is a divinity that shapes our end,
Roughhew them as we may,
A law. A law giver. Our Father. Amen."

"See through this air, this ocean, and this earth,
All matter quick and bursting into birth,
Above how high progressive life may go,
Around how wide, how deep extend below.

"Vast chain of being, which from God began,
Nature ethereal, human, angel, man,
Beast, bird, fish, insect, which no eye can see;
No glass can reach, from Infinite to Thee."

99 North Charles street.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

HÆMOPTYSIS.—An Abstract of Harveian Lectures on the Prognosis and Treatment of Chronic Diseases of the Chest in Relation to Modern Pathology. Delivered at the Harveian Society of London. By JAMES E. POLLOCK. M.D., F.R.C.P., Senior Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.

Hæmoptysis has a leading place among the events of chronic disease of the lung; and new doctrines have recently been enunciated about its influence, both as a cause and consequence of such affections.

Hæmoptysis is generally a symptom of congestion, which, in such cases, is the real condition to consider, and to treat. It is only another word for pulmonary apoplexy, of greater or less extent. There is another, and very fatal, form, which is a mere leakage from a broken vessel, and almost always the result of the rupture of a small aneurism of the pulmonary artery.

There are therefore, two kinds of hæmorrhage from the lung; the congestive and the passive.

To those who hold that chronic changes in the lung are due to inflammation, a hæmorrhage, arising from increased afflux of blood to a highly vascular tissue, is no unexpected event. It is in fact, a part and a symptom of congestion.

On the other hand, the school who believe in tubercle-formation being the essence of lung-induration, are puzzled to account for it. I would remark that acute tuberculosis—by which I mean an invasion of a large tract of one or both lungs by the grey miliary (millet-seed) tubercle—is not accompanied by hæmoptysis. The acute croupous pneumonia has its colored sputa (colored, that is, by exuded blood); but hæmorrhage, as such, is not a feature in the case.

I think we need not discuss the question, whether hæmoptysis is of pulmonary or of bronchial origin. It is almost always pulmonary.

Whether the first step in the lung-induration be an inflammation, or tubercular, we may, I think, concede that, excepting in the slowest and most insidious forms, it is accompained by congestion of lung-tissue; and hence the great prevalence of hæmoptysis. It will be remembered that the earliest changes in phthisical lungs are shedding of alveolar epithelium and block of the air-cells, with consecutive small cell changes in the walls of the cells and in the intercellular tissue, in which lie the blood-vessels and lymphatics of the lung. Engorgement is sure to follow, and impeded return of venous blood; while the tissues become softened and disorganized.

The occurrence of congestive hæmoptysis at the beginning, or in the progress of phthisis, is accompained by a high temperature, running up to 104° or 105°. Its persistence may also be gauged by the thermometer and by the pulse. Should a more or less sharp hæmoptysis subside, the temperature falls, and the pulse becomes soft.

Should the bleeding initiate a lung attack—that is, occur to a person apparently in good health—we may expect that it will be followed by the signs of consolidation of a portion of lung and the event be phthisis. There is a form of rapid phthisis, of which I have given an instance, which proceeds with great activity, after an initial florid hæmoptysis of some extent: and we must be on the look out for such, and remember that it proceeds by progressively causing patches of consolidation in the lung, of which you will have the usual physical signs.

Should congestive hæmoptysis occur (as it generally does) in the course of chronic phthisis, you may have a long pause, or suspension of active symptoms, following its cessation. I have so often had occasion to observe this event, that it seems well worth bearing in mind when called on to deliver an opinion on the result. How often, also, do we witness repeated attacks of rather profuse hæmoptysis, at long intervals, in the same patient? That a second and third hæmoptysis may succeed, is almost certain; and that an appreciable amount of relief to the lung is produced by the bleeding, I have no doubt. All these events bear strongly on my proposition at starting; that the local congestion of the lung has much to say to the clinical history of phthisis. I shall afterwards speak of its bearing on the treatment.

The structural changes induced, or directly caused, by hæmoptysis in chronic lung affections, have recently received much attention from the investigations of my colleague, Dr. Reginald Thompson.

According to his careful observations, blood poured into the bronchi, during an hæmoptysis, is drawn by insufflation into the deeper parts of the lung; and, in many instances, becomes impacted in the alveolar tissue. In this situation, the clots may remain for months and undergo slow changes, being converted into fibrinous nodules, which become capsuled, and undergo further secondary changes. "The microscopical appearances of these nodules consist of a group of alveoli, firmly packed with a semi-opaque, homogeneous, fibrinous material; and there is also thickening of the alveolar tissue, and of the interlobular tissue, which forms the investing capsule." In some instances, a copious exudation of blood-corpuscles is found in and around the air cells. The ultimate changes are, that the nodule, by shrinking, often becomes detached from its capsule, causing occasional hæmorrhage in this process; and being disintegrated, is poured into the bronchi, and expectorated—leaving a small cavity filled with a glairy food like honey. Many such secondary cavities of this kind may be found in a lung. What Dr. R. Thompson calls the traction of the sound part of the lung, initiates the separation of the nodule from its capsule.

The localities in which such blood-clots are found are observed to be chiefly in the "periphery of the lung, i. e., the summit and middle part of the upper lobe, the middle axillary region close to the pleura, the anterior inferior border, and the middle part of the base corresponding to the summit of the arch of the diaphragm." These positions are exactly those in which an inhaling force, directed from the root of the lung, or larger bronchi, to the periphery, would lodge them.

The secondary changes in such clots are not due to putrescence, for blood does not putrefy if air be excluded; and in the positions indicated, they are not reached by air. This is in accordance with Zeimssen's experiment, in which no putrescence nor caseous pneumonia followed the injection of blood into the lung-tissues of a healthy dog. The fibrinous clots become hard, of a white or light red color, often pigmented with black granules. Dr. Thompson consider that they do not degenerate into tubercle, nor irritate the tissue unless septic matter, probably from a tuberculous cavity, becomes mixed with them. Occasionally they calcify, and such products being dislodged, a small dry cavity results.

These observations, which possess much interest, show us that hæmoptysis is itself a cause of important changes in the lung in certain cases. While acknowledging their value, I must observe that a large number of cases of lung bleeding are certainly not followed by any such results. On the other hand, we should always be on the look out for them. Hæmoptysis may, as we are aware, be caused by other than tubercular or phthisical diseases, and occurs often without any secondary result whatever, as in certain instances of pulmonary congestion, due to cardiac causes. I cannot enter here into the recent controversy imported from Germany, as to whether tuberculous or destructive diseases of the lung are initiated by hæmoptysis. My own belief is, that it is not a primary causative agent in any case, but that some morbid process in the lung has preceded it.

The other form of hæmoptysis—the passive—resulting from the rupture of a pulmonary vessel, or from an aneurism of the pulmonary artery in an ulcerated lung, is very familiar to us. The mechanism appears to be that one side of a pulmonary branch will be unsupported in the walls of a cavity, so as to present softening and aneurismal bulging. The result of such rupture is often immediately fatal. It occurs in males much more frequently than in females, for, out of twenty-two fatal cases, twenty were males.

The prognosis, in cases of large hæmoptysis, should of course be guarded. No one dies of a first hæmoptysis. Large hæmorrhages are apt to be repeated, the patient belonging, probably, to the class of individuals affected by hæmophilia; or the form of disease under which he labors favoring such structural deviations as account for his bleeding. Hæmoptysis is often followed by a pause in all the symptoms, the congestion of the the lung being relieved. Many of the longest cases I have seen have been most frequently attacked by moderate hæmoptysis.

The case of a schoolmistress, now aged 43, whom I have watched since she was fifteen, has been often referred to by me. At the age of fifteen, a cavity formed in her left lung. Under my notice, long since, the subclavian walls have fallen in, and a dry cavity of smaller size exists. She has a rather profuse hæmoptysis once in several months In her ordinary state she is rosy, well nourished, and weighs about twelve stone. Every hæmoptysis relieves her from dyspnœa and cough. She still teaches in a national school.

Having considered the secondary changes which hæmoptysis may produce in the lung-tissues, apart from any tubercular development, we may examine the secondary local affections which occur in the course of most cases of chronic diseases of the lung.

In old times, these fibrinous or calcified deposits were regargded as tubercle. But modern pathology decides that in certain instances, sufficiently numerous, they are simply due to impacted blood-clots, which ultimately undergo degenerate changes. They are thus analogous to the alterations undergone by inflammatory exudations in other parts of the body. Many of our most chronic cases are doubtless of this class, and their extreme chronicity is an argument in favor of their origin from such cause. It has been said of tubercle that its life is short; and it is certainly most in accordance with modern observation, that a few months, at most, complete the various changes from its development to its death and degeneration.

But these puzzling and very chronic cases which last for years, with signs of consolidation or of cavity in one portion of the lung, may often be accounted for by an altered blood-exudation, which has retained only its fibrinous character. or has become calcified in the lung-tissues. These considerations should be present with us in forming a diagnosis, or in offering a prognosis of very chronic cases. In such we may not be witnessing the final degeneration of a mass of tubercle, but only the result of hæmorrhagic impaction, or of inflammatory exudation.

I turn now to the *secondary local affections* of the lung, and they are of great clinical interest.

A patient, suffering from active disease in a part of one lung, will have the opposite lung at base or apex, or the lower part of the same lung, attacked by congestion: that is, an induration similar in physical conditions to that which first existed, will develop in a distant part. You will have, say, a patch of dulness; breath sounds more or less tubular, and crackle or moist crepitation. Febrile symptoms accompany or rather precede, the physical signs, for the patient will have chills, high temperature up to 104° or 105°, pain in the side, rapid pulse and possibly a congestive hæmoptysis before the physical signs are developed. Is this first attack in a distant part of the lung due to taking cold or exposure? As the event is witnessed daily in our hospitals where the patient is guarded from every such event, we must reject this explanation.

That it is due to infection seems likely from the following circumstances:

1. From the likeness of the secondary to the primary affection. The congested or indurated portion of lung is found in the same pathological condition; that is, either an inflammatory exudation occurs affecting the alveolar and interalveolar tissues, or a deposit of that which is recognized as miliary tubercle takes place. The irritative fever accompanying it is also identical.

2. That it is not a mere extension by continuity of morbid processes is evident from the fact of distance, por-

tions of healthy lung intervening. At the same time, such direct extension does occasionally occur, but forms no argument against the infective theory.

3. Facilities for conveyance of morbid matters are abundant; either directly by mechanical conveyance through the air-tubes, or indirectly by the lymphatics and blood vessels.

4. Analogies may be found in the extension of cancer to distant parts, or in the secondary abscesses from pyæmia, although the septic element has probably much to do with the latter.

An argument in favor of the infective theory may be found in the period of lung disease in which these secondary attacks occur. According to my observation, they are most common during the period of softening, when tissue-compounds are disintegrating, and in a condition to enter the circulation of the lymphatics. They are also least common in cases of chronic cavity well defined, and, as we know, lined by a membrane, and surrounded by fibrous formations, which obstruct all the vessels and harden the tissues.

Before leaving this part of the subject, I would remark on the prognostic indications to be gathered from such attacks. They are among the most fatal events in phthisis, and it may indeed be said that they form the terminal period to most of our chronic cases. Viewed as congestions they are never completely recovered, and regarded as extensions of tubercular deposit, they only indicate a further and lower stage of disease.

In forming a prognosis of any given case, we must then mainly consider the form and limits of disease, the existing symptoms, and the modifying agents found in age and heredity. Of form and limit I have given illustrations in the apex disease, well defined with much induration; and in the diffused form of disease which does not attain to the stage of cavity.

In chronic cavity, large or small, but single, and situated at the apex of one lung, we have generally a very prolonged example of tolerated disease. The mechanical conditions of localization and limit have been complied with; the necrotic processes have been completed, and a membrane lines the walls. The pulmonary and nutrient vessels have become obliterated. It is, however, a necessary condition that a healthy circulation should exist in the surrounding parts, and this is a *sine qua non* for shrinkage and possible cicatrization. The surrounding cells are generally emphysematous, and two or three are often found thrown into one. Such cavities may enlarge, or from traction of other parts of the lung, may become united to another neighboring cavity.

But their undoubted tendency is to contract, and that of the surrounding parts of a healthy lung is to expand; and this should be remembered in treatment. Such cavities are large secreting surfaces, and are liable to catarrh, or, as my colleague, Dr. Powell, expresses it, a man may catch cold in his cavity from ordinary causes, and at such times there is increased secretion which may afterwards dry up. Cavities deep in the lung, with imperfect or circuitous connection with a bronchial tube of some size, are very apt to permit the formation of collections of secretions which become fœtid, when the patient becomes intolerable to himself and others, and septic fever may arise and prove fatal or shorten his life. In such a state, his condition differs but little from that of chronic abscesses in parts of the body, and the surgical treatment by free emptying and drainage will form part of our considerations when next we meet. The other misadventures to which a cavity is liable are, profuse hæmorrhage from a pulmonary vessel generally lying in its side, and protected at one part, permitting bulging and progressive softening, or aneurismal dilatation. A pneumothorax from softening of the walls of the cavity or tubercular ulceration of the investing pleura may, in rare instances, complicate and precipitate the case.

But on the whole, from its representing a local disorder which has completed its degenerative changes, from its distinct limitation by fibroid alterations of connective tissue around it, and from its isolation in the lung, it must be regarded as a form of disease tending to great chronicity.

In forming a prognosis in any given case, the chief symptoms which must decide a favorable or adverse result, are *fever* and *wasting*.

High temperature means the presence in the blood of febrific materials, the result of caseous degenerative changes in the lung. As is well known, there is a daily evening exacerbation, and the minimum is generally found about 7 A. M. In a chronic quiescent case of phthisis, these changes vary but little from the healthy standard. That which is of evil import is a high evening maximum followed by a low morning minimum. The acute angled curve in the diagram, with a large diurnal change, is much to be dreaded. The gradually declining curve means diminished febrific material in the blood, and a coinciding diminution of urgent symptoms. A rapid sudden rise often indicates an approaching hæmoptysis, or a local congestion, or a deposit of miliary tubercle in a distant part of the lung. A sudden fall to a sub-temperature is indicative of collapse, and often precedes a fatal issue.

From the fact of the minimum temperature occurring in the early morning, we may gather the indication for nourishment to be administered to the patient at that time.

Upon the subject of temperature, we may notice that the absence of high temperature contra-indicates phthisis in doubtful cases where the physical signs are of a dubious character; and it may be remarked that, although the thermometer is occasionally at fault in offering positive evidence of existing disease, it is invaluable where giving negative results in doubtful cases.

Finally, we may remark, that the temperature will be found highest in acute florid phthisis, with extensive infiltration of caseous masses, while it is lowest in cases where fibrous alterations are most complete, because in the latter case there remains no broken-down material to be absorbed.

Of wasting of the body, it is to be remembered that progressive waste and high temperature are almost always coincident; and that the third element of phthisis, progressive local disease, is seldom absent in such an evil concurrence.

Progressive improvement in weight is generally, but not always, coincident with a stationary or improving condition of the lung. It is, of course, a favorable state; but in very numerous instances it will be found that, while a patient is daily adding to his weight, a steady but slow increase of local disease is proceeding.

Hæmoptysis, which is common to every stage of phthisis, is an uncertain guide in prognosis. A rapid uncontrollable form of disease is often begun by hæmorrhage, the tendency of which is to repeat itself at short intervals. I have before considered the conditions of lung which result in such forms; some consisting of a succession of congestions, which unite and break up all the tissues. The more remote events which follow the impaction of clots should be remembered.

But it is undeniable that some of our most prolonged cases are hæmorrhagic. The congestion of the lung appears to be relieved by the bleeding, and a long pause often occurs, during which the symptoms are in abeyance, and the patient loses his fever and recovers flesh.

The influence of age on the development and progress of chronic affections of the lung is well marked. The strumous cases—infectious from the break up of scrofulous inflammation—are naturally found in the earlier periods of life, during the years of growth, and in early adult age. Hence the large proportion of cases are found at that time. The more acute and rapid forms of disease are also placed here, and the more urgent symptoms as high temperature and rapidity of waste, and profuse congestive hæmoptysis. But, about the middle period of life, although phthisis has not ceased, there is a noted lessening of its frequency, and a marked difference in its type. The degenerative changes in the lung are more of the class belonging to chronic induration than to caseation. At Chelsea Hospital, in the bodies of men aged from sixty to eighty, half the cases exhibited chronic diffused grey consolidation, concretions in the lung, excavations, or traces of recent and old cicatrized cavities.

The type of chronic lung-disease after 45 is slow; the febrile action mild, the secondary complications few; and there is precisely what might have been expected from a knowledge of its pathology. After 45 many cases of phthisis occur, although at that age insurance-offices reckon that the liability has been passed. Christian found that 22 per cent. of the deaths in lives selected by the Scottish Widows' Fund, occurred from phthisis between forty and fifty years of age. It is at this time of life that old deposits in the lung, the result of low inflammatory action, often at the base, break up, and may assume the tubercular form.

On the whole, we may assume, in offering a prognosis, that the more advanced the age, the more likely is it that instances of disease will be latent in development, and chronic in form.

Permanent acceleration of pulse in the aged is often indicative of latent advancing disease. The complications, as profuse hæmoptysis, diarrhœa, and laryngitis are uncommon.

Did time permit, I should have much to say of the influences of heredity on chronic disease of the lung, both as a cause, and as influencing the form and progress of disease. I must confine myself to a few of the leading considerations.

From extended and careful observations I believe that two-thirds of the cases of phthisis have had the hereditary element. Heredity should include remote ancestry. The common mode is to inquire if parents, brothers or sisters have had the disease, but this is manifestly only a part of the story of our position in the chain of animal life; our inquiry, to be correct or reliable, should extend back for several generations on both father's and mother's side.

We are familiar with the fact that form and features, organic peculiarities, mental configuration, the shape of hand or foot, habits of movement, moral power or weakness, and especially emotions, are transmissible, not only from parent to child, but often an individual will reflect some of the peculiarities which have been known to characterize an uncle or grandparent in a remarkable degree. And so it is of what we call constitution, which means peculiarities of vital organization.

It is true that the germ so inherited does not always produce fruit, because the soil may be unfitted for its growth. Thus, one individual in the chain of inherited weakness may escape. On the other hand, it is not to be forgotten that he may be a transmitter of disease, although not personally a sufferer. His children may, under favorable circumstances, develop the ancestral tendency.

Again, forms of disease are transmitted. Many members of the same family often die at the same age, of the same form or variety of phthisis that one individual after the other appears to develop on arriving at the same period of life; which, in such cases, is generally early. We are all of us familiar with this painful fact in practice. Just as longevity is distinctly transmissible, just as members of the same family reach the same age of advanced life, which is indeed the term for which the machinery is adapted to last—so the inherited germ takes root, and develops a fatal disorder at a given period of growth in earlier life. I have known several members of one family, in repeated instances, exhibit precisely the same variety of phthisis—cavity, or diffused disease, or acute tuberculosis—as others of the same stock who preceded them. The hæmoptysical variety is notably heritable, and runs in families.

The question of marriages of near consanguinity arises here; and I believe they are safe, unless there be in the race some proclivity to disease, which, in such case, is precipitated on the offspring from both parents. Such are some of the more prominent facts about heredity; and in forming a prognosis of any given case of disease, they should always be borne in mind.

In concluding this portion of our subject, we may enumerate some of the leading features of the more favorable, and contrast them with the less favorable conditions of chronic lung-disease.

The more favorable local conditions are:

1. Well limited induration. The more a portion of lung is indurated, shown by marked and defined dulness, and the other signs of consolidation, the better the prognosis. The more marked, on the other hand, the signs of caseation and degeneration processes, the worse the prognosis.

2. The single cavity, well limited, and defined: the other parts of the lung unaffected.

3. The diffused form of the disease, which I have described as exhibiting crepitant sounds over a large surface of lung, with moderate dulness, and slightly impaired movements in a well shaped chest.

4. The existence of extensive fibroid alterations, with well-marked characters.

Among the general favorable conditions, the most important by far are the absence of fever and waste. These two symptoms are, as we know, concurrent in almost every case. The fever, being fed by morbific material from the disintegration of caseous products in the lung, is a direct measure of local irritation, and the amount and degree of local irritation may almost be said to be the measure of the patient's danger. Loss of flesh is always an evil symptom, as progressive regain of weight is good.

As regards temperature, high maxima and low minima are of bad import. The table-curve of temperature which is best, is one which, avoiding extreme fluctuation, gradually subsides to low or normal level, and remains there, with the slight diurnal variations of health.

The absence of secondary complications, as diarrhœa or laryngeal ulceration, is of primary importance, if we are to hope for prolongation of our case, or restoration to comparative health. Diarrhœa of the persistent form is especially prejudicial; also anorexia or vomiting, often repeated. With a fairly sound digestion, your patient may weather many lung-difficulties; and I consider this next in importance to the absence of fever and wasting.

Finally, to the above conditions we may add the following:

Absence of hereditary taint.

Age past forty-five.

The chest well-shaped (not of the phthisical form).

In making a summary of the symptoms of any case, the physician, carrying his knowledge with him, ever ready of application, will doubtless apply the doctrine of averages to every individual he sees. But he will also gather indications from a variety of minute signs—the face, the hand, the skin of his patient; and also from his general nerve-condition; and by a multitude of minute symptoms difficult to put in words, he will come to a judgment as to his vital powers of resistance. Especially, he will remember that chronic chest-disease is multiform; that some individuals outlive a vast amount of local disease and systemic waste, while others succumb to comparatively light disorders. He should also not be in haste to prophesy results from any given condition of his patient. Especially should he avoid condemning a case as in the "last stage," a term formerly applied to cavity in the lung, but inapplicable as expressing a local condition only. The patient's powers should be measured, and his vital resistance estimated, and the numberless cases remembered which have outlived evil prognostics, and possibly adorned the short-lived triumph of some quack medicine.

While condemning everything untruthful in opinion, we are bound to give our patient every encouragement which is truly derived from an intimate study of his disease. Above all, never let us prophesy as to time. You will often be pressed to say how long; but, unless in cases of impending death, we are not called on thus to map out disease. For, indeed, it is not often possible to assign a duration to even our most advanced cases; and to become prophets as to time is to subject our art to almost certain depreciation in the eyes of the vulgar.—*The British Medical Journal.*

THE NORMAL AXIS OF THE SOLE OF THE HUMAN FOOT. By DR. BENJAMIN LEE, Philadelphia.

It is a universal popular belief that the human foot is straight, and that in its straightness lies its beauty. Nor is this impression confined to laymen. If I should put the direct question to this Society, composed as it is of men learned in anatomy, "Is the axis of the sole of the foot strait, or crooked?" the probability is that a very large majority would unhesitatingly reply, "straight." Nothing, however, can be further from the truth. The axis of the natural, undeformed foot is a curved line. By the sole of the foot I understand that portion of the naked foot which comes in contact with the shape of the sole of the shoe. By the axis of the sole I understand a line starting at the middle of the posterior edge of the heel or *os calcis*, and running forward in the median line of the sole, until it terminates at the middle of the toes, which point lies usually between the second and third toes. Now this line will be found to be straight for a little more than the length of the *os calcis;* it then begins to diverge towards the mesial line of the body or inner side of the foot. If continued as a straight line, instead of striking the middle of the foot anteriorly, it will, in the great majority of cases, strike the middle of the little toe. A glance at these diagrams, which I have made of heroic size in order that they may be readily seen and understood from all parts of the room, will convey the idea in less time than words could. The one, the straight sole (fig. 5) is the ideal of the shoemaker; the other the curved sole (fig. 6), the ideal of the anatomist, of the artist, and, I say it with all reverence, of the Creator.

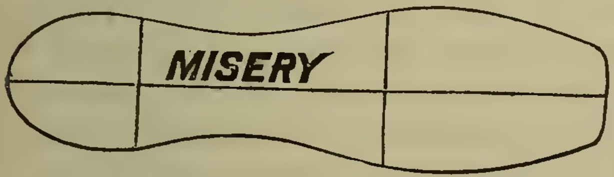


Fig. 5. Straight sole. The ideal of the shoemaker.

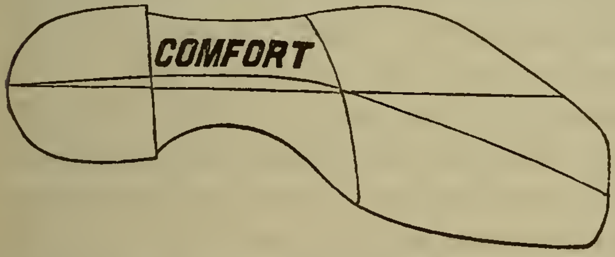


Fig. 6. Curved sole. The ideal of the anatomist.

To Prof. Hermann Meyer, of the University of Zurich, is Europe, and indeed the civilized world, indebted for its emancipation, not yet fully realized, from the galling tyranny of the French bootmaker and the French dancing master, a tyranny by the side of which, if measured by the misery it has caused, that of Czar and Emperor sinks into comparative insignificance; In the modest little pamphlet, entitled "WHY THE SHOE PINCHES," he discussed in the fullest and most scientific manner the anatomy of the foot, and showed conclusively that the principle upon which shoes were universally constructed was radically wrong, and could result only in injury to that most valuable member. The two points to which he especially took exception were: First, The idea that the entire sole is straight; and Second, The idea that the inner side of the foot from the metatarso-phalangeal joint of the great toe to its extremity is curved. The second error is almost as serious as the first. In point of fact, the great toe, in a natural, undeformed foot is straight. The aim of the shoemaker has been to make each foot symmetrical in itself, while the foot, being a double organ, follows the law of all double organs. and is symmetrical only with its fellows. If we could succeed in making both feet exactly alike we should at once lose the beauty which comes from the comparison of the two objects symmetrically unlike; one of the highest sources of gratification which the sense of sight is capable of appreciating. In carrying out this aim the shoemaker has made the shoe not what it should be, a covering for and protection to the foot, but an *orthopœdic instrument*, the object of which is to straighten out its natural curve.

A glance at these diagrams, as I place one over the other, will show at what points the pressure is applied in order to produce this result. (Fig. 7.)

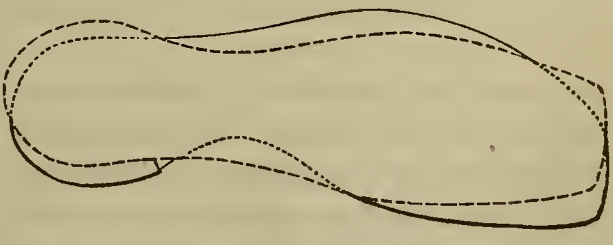


Fig. 7. The straight and curved soles contrasted, show where the pressure is exerted in straightening the foot.

They are observed to be the inner side of the heel, the outer side of the middle of the foot, and the inner side of the great toe. It is also to be noticed that at the same time that strong pressure is brought to bear upon the first or metatarsal joint of the great toe, its distal extremity is forced toward the middle line of the foot; the result of this necessarily is to convert the inner surface of the articular portion of the metatarsal bone into a fulcrum, against which the first phalanx is forced outwards. The articular surface of the phalanx is thus uncovered, and, instead of remaining in contact with the opposite articulating surface of the metatarsal bone, it is in contact with the shoe, protected only by integument. A provisional bursa is sometimes established, itself often the seat of inflammation; but this does not prevent the sensitive joint surface and the synovial membrane from ultimately receiving injurious pressure, which results in the hideous and painful deformity known as a *bunion*. At the other end of the toe the continued pressure against the matrix of the nail induces a suppurative inflammation of low grade, with fungous granulations, to which the name of *in-growing toe-nail* is given; while the other toes crowded together and overlapping (fig. 8.), are not long in becoming knobbed with corns and callosities. By dint of beginning in early infancy or childhood, as Chinese mothers do, the shoemaker sometimes completely succeeds in his object of straightening out the curve of the foot. The drawing which I now show you (fig. 9.) is a tracing of an actual foot. As you observe, its axis is a straight line from the middle of the heel to the middle of the toes; but you also notice at what a fearful cost of years of suffering, as witnessed by the enormous bunion, the result has been obtained. It may well be doubted whether, to use the expressive French phrase, the "game has been worth the candle."

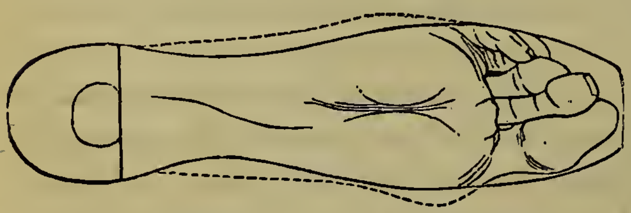


Fig. 8. The position of the toes in a straight-soled shoe.

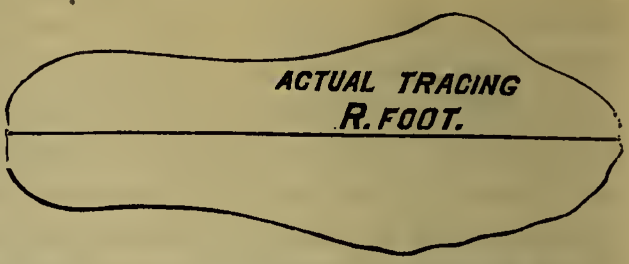


Fig. 9. The straight foot. The shoemaker's triumph.

The process of deforming the foot of an American child is usually about as follows: As soon as the victim is able to walk, a pair of straight-soled shoes, rather narrower than the feet, is provided for it. In the course of a few weeks the shoes, being worn the one habitually on the right and the other on the left foot, begin to take the shape of the respective feet. This is no sooner observed by the careful mother than she exclaims: "Why, Johnny! you're wearing your new shoes all out of shape; you must change, and wear them on the other feet." And if Johnny forgets, finding the change by no means conducive to comfort, he is whipped to aid his memory. It will readily be understood how well adapted these shoes, now conformed to the natural curves of the feet, are to straighten out the curves of the opposite feet. By this simple means, repeated as often as the feet begin to assert their independence, and persistently carried out, it often happens that by the time a child is six years old, its great toe will be seriously deflected from the rectilinear position, which it ought to occupy, and the curve of the sole partially straightened.

Fortunately, lasts and ready-made shoes can now be obtained which approximate quite closely to the natural shape of the foot; and not only can the foot of the child be preserved perfect, as it grows up, by using such lasts and shoes, but a foot which is already somewhat distorted may be coaxed back more or less nearly to its original shape. I can speak experimentally on this point, which must be my excuse for the apparent egotism of introducing a tracing of my own foot. When I first began to wear shoes made with regard to this principle, more than twenty years ago, my feet were about as much out of shape as the average adult foot. I had numerous corns and a fair promise of bunions and of an in-growing toe-nail on the left foot. And here let me advert to a fact not generally known, viz., that the left foot is usually the longest. In ignorance of this, the right foot is usually given to the shoemaker for measurement; hence the left shoe is too small, and the left foot is the one which is most apt to become crippled. You will notice the marked curve of the axis of this sole (fig. 10.), and the straightness of the inner edge of the great toe, which of course means that the toe itself is straight; and you will perhaps be ready to exclaim, with the Philadelphia shoemaker to whom I showed my lasts on coming to reside in that city: "Why, doctor! what a crooked foot you must have!" Although he very reluctantly makes my shoes on them, he will never believe to this day that my foot is not deformed.

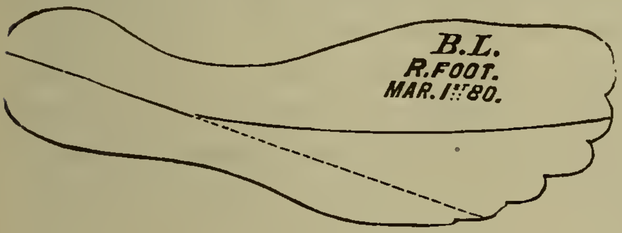


Fig. 10. Twenty years of an anatomical shoe.

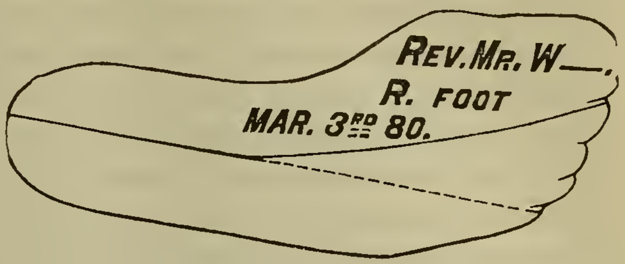


Fig. 11. A nearly natural foot. The result of wearing easy broad-soled shoes.

Here is another tracing (fig. 11.) of a tolerably natural foot which I happened to obtain in the following way: A clerical patient coming into my office not long since, observed a tracing of my own foot, which I have just shown you, lying on my desk. Picking it up, he regarded it mournfully for a moment, heaving a deep sigh, and said: "Ah! doctor, that is just the deformity of my little boy's foot. I must bring him to see you." While expressing my sympathy with his little son's misfortune, I assured him he was in error in supposing that the drawing represented a deformed foot, as it was that of my own, which was tolerably natural. Finding it impossible to overcome his incredulity on this point, I glanced down at his own feet, and noticed that he wore a good, generous, broad-soled shoe, which could not have produced much distortion; and said confidently, "I venture to say that your own foot is nearly as crooked as mine." He at once took off his shoe and stocking in order to disprove the truth of my assertion, and this is the result. You observe here again the curved axis, the straight line from the middle of the heel striking the little toe, and the straight great toe.

We find, as a rule, the feet of women much less seriously deformed than those of men, especially in the higher walks of life, from the fact that their shoes are made of so much softer materials, and that they lead, on the whole, more sedentary lives. And when a lady has been confined to bed for a long period of time by chronic illness, her foot often acquires an almost perfect shape. One such foot I have seen, white as alabaster, exquisite in its outlines and curves as a sculptor's dream. Its proprietor has been for many years confined to her room, most of the time to her bed, but, as is often the case in such maladies, had lost nothing of her youthful plumpness and beauty. The drawing (fig. 12.) belongs to that category, the patient having been a confirmed invalid for two years.

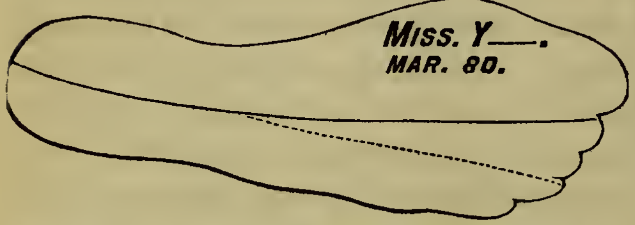


Fig. 12. A foot once deformed by shoes partially restored by disuse of shoes.

The ready made shoe, to which I have referred as conforming to the principle I have announced, is known as the "Waukenphast," first introduced under that name in England, but now manufactured quite extensively in New England. It may be obtained of Wanamaker in Philadelphia, and is made of so many different proportions as well as numbers, that almost any foot can be fitted by simply sending the measurements. There are also a number of shoemakers in Philadelphia who have provided themselves with full sets of lasts of this pattern, and make the shoe to order. Contrast the comfortable, easy, natural position of the toes in such a shoe (fig. 13.) with that of the cramped distorted, overlapping toes in fig. 8., and nothing further will be needed in the way of argument. I feel confident that in bringing this humble subject to your notice, I have deserved and shall receive the gratitude of every member who has known what it is to suffer the torture of an improperly made shoe and its consequences. I feel not less confident that there is a good time coming, when the shoe will universally be conformed to the natural shape of the foot, and when, as a necessary result, corns bunions, *et id omne genus* will cease from off the face of the earth.—*Trans. Med. Soc. Penn.*, Vol. XIII. Part. I.

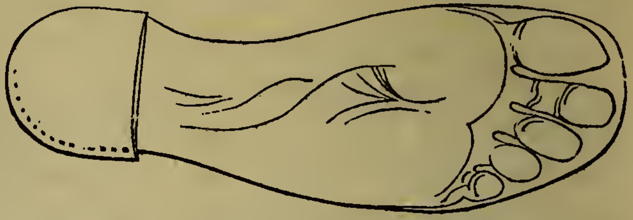


Fig. 13. Position of toes in an anatomically constructed shoe.

Despotism in Lunatic Asylums. By Dorman B. Eaton.

Of all the afflictions which appeal to human justice and sympathy, none is so anomalous, none so little understood, none so threatening, as insanity. Experts dispute about its definition. Mystery hangs over its cause. Grave doubts obstruct its cure. The common people are perplexed whether to regard it as a mysterious disgrace, a natural disease, or an avenging dispensation of Providence. Judges and juries, in dealing with it, are lost in mazes of metaphysics and in masses of conflicting opinions. Thrust into forbidding poor-houses, or masked and guarded in great asylums, no wonder it has been so little comprehended or cared for by the average good citizen. But now, as never before in this country, it is arresting the thoughts of statesmen and moving the hearts of philanthropists. And none too soon. For while science and benevolence, by setting limits to disease and affliction, have extended the duration of human life; while ignorance and crime have diminished, and education has become more extended and profound, insanity, and insanity alone among our great afflictions, has become both more frequent and more fatal in this country.

Two States are fairly representative. The commissioners' report of the insane in Massachusetts, for 1879, declares that "every year presents marked evidence of the increase of insanity." There are about 5,000 insane in the State. The chronic or incurable cases are now more than three-fourths of the whole, and are steadily increasing. The cost of caring for the lunatics of the State (exclusive, we think, of investment in asylums and lands) is now almost a million of dollars a year, and, like the number of the insane, advances in a ratio greater than either population or wealth. In New York, the insane—estimated at 5,032 in 1871, at 7,921 in 1877, at 9,015 in 1879—had, in 1880, reached 9,543, in its various institutions. Making ample allowance for the more complete collection of the lunatics into asylums and poor-houses, we, here also, have a ratio of increase far in excess of that of population. "The rapid increase of insanity is truly alarming," says the last message of Governor Cornell. The one disease that is worse than all others—which takes from man what most distinguishes him from the brutes—defies our remedies, and threatens our national progress.

Palatial asylums, constructed and furnished at an expense unparalleled in the world, and consigned to the almost absolute control of asylum doctors and trustees, have utterly failed to check the disease. Erected in the hope of supplying the needs of a generation, they barely hold the additions to the insane made during the very years of their construction. Year by year, since their completion, insanity has more frequently blighted our children, more broadly stricken middle life, more irresistibly tended to become chronic, more rapidly and certainly carried its victims to the grave. Well-informed alienists even declare that from five-sixths to nine-tenths of all lunatics now in American asylums are incurable. There seems to be no other country in which the facts appear so alarming.

In whatever degree the cause of insanity may be due to our overexertion for wealth and social distinction, to our vicious indulgences, to our overstimulating climate, or to our vicious system of lunacy administration, the need of better methods of prevention and treatment are much the same. The facts in every direction are perplexing enough. The most frequent cases of insanity appear to be between the ages of thirty and fifty, and the greatest ratio of victims, except on the part of the grossly licentious and intemperate, to be among our humble laborers and the unaspiring inmates of our farm-houses; while the class whose mental work is severest supply comparatively few victims. But most serious of all are the facts that near half the cases of insanity may be traced to hereditary causes, and that, in its ever-widening range, it is poisoning the vital currents which are to flow and blight in the next generations. Humanity, statesmanship, self-preservation, therefore, require that the grave question of insanity be brought forth from the filth and politics of the poor-houses, and from the secrecy, the mystery, and the professional metaphysics of the asylums and the doctors, and set up in the form of public debate and criticism. It is none too soon that, this year, a national association for "the protection of the insane and the prevention of insanity" has been formed; that, at this moment, a committee of the State Senate of

New York is taking voluminous testimony upon the subject, and that the mysterious abuses within the walls of our asylums and the lunatic wards of poor-houses are more and more receiving the attention of the public press.

Our subject, however, is not the causes or the perils of insanity, but the care of the insane. Want of space allows but a limited view. A very important part—the professional or medical aspects of the subject—must be excluded; and so must those rich lessons of experience which may be drawn from the history of asylum treatment, which shows a steady progress from blows, dungeons, and chains, in the time of Pinel, and from straight-waistcoats, muffs, leg-locks, and general brutality, in the time of Connolly, down to our day, when the degree of freedom from physical restraint is at once the test and the measure of good asylum management. For the same reason, no adequate discrimination can be made between the merits of particular institutions, or the systems of different States. The corruption, the brutality, the neglect, the demoralizing partisan politics, so often tolerated in our town and country poor-houses; the extravagant outlay for asylum buildings; the cruel and needless suppression of the letters of inmates to their friends and relatives; the need of isolating the chronic insane; the value of employment and amusements as curative agencies, especially as illustrated at the Vermont Asylum at Brattleboro'; the great success which has attended the discontinuance of needless restraint and punishment in some asylums in later years, and notably in the asylum at Flatbush, Long Island, under the charge of Dr. Shaw; the striking reforms which have followed public criticism and the more searching visitations by State boards of charity within the last decade; these important matters can receive hardly more than this passing notice.

The few brief facts we can present may give some idea of what has been possible under our lunacy system, and what reforms an aroused public opinion led by a few superintendents and philanthropists having the courage to break through that system, may be able to accomplish. The late investigation of the New York asylum for insane convicts disclosed facts that would disgrace Turkey; filth, vermin, contagious disease, food hardly less fatal than starvation itself; two pistol-balls in the body of one inmate, fired by his superintendent; a lunatic shackled and handcuffed night and day for two months; but no records of medicine, of treatment, of punishment, or of diet! At the same time, when similar horrors were being perpetrated in the city and country poor-houses, three asylum palaces were rising in the State, under plans furnished by asylum doctors and asylum trustees, that would make them cost about $5,000,000, or at the incredible rate of $4,000 to each patient. Only last week the present superintendent of the Ward's Island Asylum gave this testimony before the committee just referred to:

> "When I came on the island, I was more afraid of the keepers than the lunatics. The keepers were mostly shoulder-hitters, and they made a regular slaughter-house of the place."

The writer had just visited the Flatbush Asylum, and seen its seven hundred inmates, without apparent bruise or any restraint upon the body or limbs of one of them. Yet, it is only about a year since Superintendent Shaw, rebelling against our asylum system and its leaders, made a great bonfire of more than three hundred camisoles, straps, straight-jackets, and other implements of restraint, which the former attendants had used much as they pleased. The doctor has also within that time closed more than two hundred holes, in as many bed-room-prison doors, behind which many inmates had been confined, inspected, and fed, like dangerous beasts. These room doors are now as freely open as they are in most European asylums. A leading officer in lunacy, in Massachusetts, declares "that of the $1,500,000 required for the accommodation of four hundred and fifty patients (at Danvers), *nearly one-third was spent upon the officers' buildings*; . . . while the poor insane are not accommodated at all. . . . Within sight, almost, of the Danvers palace, in a town almshouse, I have seen an insane woman, naked and helpless, sitting in a wooden box filled with straw." Ohio and other States, if we had space, could add new counts to this humiliating indictment.

The evils referred to, except those growing directly out of the partisan spoils system of our politics, are, in the main, but legitimate consequences of our American system of asylum management. That system not only shuts out from asylum life the healthy breezes from the great ocean of public thought and sentiment, but it is in itself a prolific source of mischief. We propose to compare it with the better system which prevails in the leading States of Europe.

Some decisive facts are beyond dispute, and we need to have a clear view of them in the outset.

1. Insanity is cosmopolitan in character and in the conditions of its successful treatment. If the success attained in any one enlightened country is not soon reached in every other, there must be some discreditable cause.

2. By the united testimony of the foremost alienists of Europe, who have visited this country, and of agents sent to study the European system by the leading States of the Union, and of the most candid American thinkers on insanity, the lunacy administration of the principal European states is decidedly more economical, more humane and more effective for good than our own. In freedom from physical restraint, in efficiency of inspection, in publicity of management, and in regard for public opinion, their asylums, as a rule, are far in advance of those of the United States.

3. It is beyond dispute that no people are more intelligent and that none have exhibited more generosity and humanity in dealing with the insane than the people of this country.

4. It may be claimed, we think, that in no country has the medical profession more capacity for dealing with nervous diseases and all sorts of morbid conditions, including insanity itself, than in the United States.

Consistently with such facts, only these reasons can explain our second-rate lunacy administration:

First, That the public sentiment and intelligence have not been stirred on the subject, and that the skill of the medical profession has not been brought to bear upon the treatment of the insane. *Second*, That we have a vicious and defective system for the care of lunatics, which excludes light and wisdom from without and breeds and screens abuses within the circle of administration. We think it clear that both these causes exist. They are in a measure dependent upon each other. A deceptive and vicious system, adroitly and ably administered, has lulled and misled public opinion; screening abuses by secrecy, shutting out light by arbitrary methods, defying exposure and change by the exercise of a despotic authority which ought never to have been conferred upon the managers of asylums. It has followed, as a natural consequence of this system, rather than as an independent cause of inferior administration, that public opinion has been suspicious but not aggressive; alarmed but not aroused to action; anxious for information, but unable to get it; ready to do a work of reform, but finding the way everywhere barricaded by those in authority under that system. Great as is the need for carrying forward the free and bold discussion of every part of the subject—now fairly opened—in public meetings, in the daily press, in reviews, and works of fiction—as was the case in Great Britain a generation ago—there is yet especial need that the tyrannical system, itself, should be arraigned at the bar of public opinion and clearly comprehended by the popular mind.

Let us go to the very centre of the matter and compare the American system of lunacy administration with that system which in Europe has given results so superior. Only the most decisive features can be contrasted. The English system must stand for that of Europe and the New York system for that of the United States. The Revised Statutes of 1874, for governing the lunatic asylum at Utica, New York, is expressly made the model for all others in the State, and it most clearly shows the American system. There is no space for noting the difference between the poor-house and the asylum theories and methods for treating the insane. They are equally secret, arbitrary, and irresponsible, but not equally cruel or corrupt.

It is the asylums—the asylum doctors and the asylum trustees and their system—which have become a great power, alike in politics and in medicine, in the lobby of legislatures, and in the purlieus of executive chambers.

We may say that the English and American systems were substantially the same up to about 1845. The widely different conditions in the two, at this moment, have grown out of widely differing systems since that date. Let us now see what the American system is by showing the theory and method for governing the asylum at Utica.

Nine trustees, a majority of whom must reside within five miles of the asylum, are to govern it. They make such by-laws and regulations as they deem expedient. They appoint the treasurer and the superintendent. They, by approval, determine the number of employes and their salaries. They keep the only records of their own doings. They inspect their own work. They (or their subordinate, the superintendent) make all purchases. They audit their own bills. They report to the legislature the only authorized version of their own conduct. Neither their report nor that of their subordinate, the treasurer, is required to contain such particulars as would disclose extravagance or any other abuses. As private owners of the institution, they could not have power more absolute and irresponsible. The most ordinary and essential checks upon extravagance, favoritism, and neglect are utterly wanting.

But the authority of the asylum superintendent is, if possible, more dangerous and unchecked than that of the trustees. He is an autocrat—absolutely unique in this republic—supreme and irresistible alike in the domain of medicine, in the domain of business, and in the domain of discipline and punishment. He is the monarch of all he surveys, from the great palace to the hen-coops, from pills to muffs and handcuffs, from music in the parlors to confinement in the prison rooms; from the hour he receives his prisoner to the hour when his advice restores him to liberty. Here is the almost incredible power given by statute to an asylum superintendent. He assigns all officers and employés to duty. He prescribes all diet and treatment. He appoints (subject to the managers' approval) as many assistants and attendants as he thinks proper. He prescribes their duties and places. He (subject to the managers' approval) fixes their compensation. He discharges any of them "at his sole discretion." He suspends any resident officers. He can give "*all orders he may judge best*. . . . in every department of labor and expense." He is authorized to "maintain discipline," and "to enforce obedience" to all his own orders. He keeps the only required accounts, and the only record of his doings, "and of the entire business operations of the institution." He approves the bills he has contracted. He makes the only report of his own administration. He too is the person who gives the permit upon which his prisoners may be restored to liberty.

This unparalleled despotism—extending to all conduct, to all hours, to all food, to all medicine, to all conditions of happiness, to all connection with the outer world, to all possibilities of regaining liberty—awaits those whose commitments may easily be unjust if not fraudulent, whose life is shrouded in a secrecy and seclusion unknown beyond the walls of an insane asylum—is over prisoners the most pitiable of human beings, whose protests and prayers for relief their keepers declare, and many good people believe no man is bound to respect! When Frederick the Great defined his despotism as one under which he did what he was a mind to, and his subjects said what they were a mind to, his subjects were able to speak for themselves, and could make their complaints ring through the kingdom. It would be almost incredible that such authority should be conferred upon any officer in this country, had not the public for a long time supinely accepted their theories about insanity from asylum superintendents, by whom this statute was so naturally dictated in their own interests. It assumes superintendents to be saints, with whom passion, selfishness, revenge, and neglect are impossible.

It is true that the local trustees, by whom the superintendent is selected and who makes his place more secure by putting their relatives and political henchmen where they get good salaries, have a liberty and duty of inspection. But do we need to read the reciprocal compliments between the superintendents and the trustees, so prominent in their reports, to comprehend that the relations between them —involving all the secrets, the favoritism, the partizan interests, the contracts, sinecures, and profits of asylum management—are fatal to all independent or thorough inspection?

It is a part of the system that the board of trustees shall erect the asylum buildings, keeping all accounts, making all reports, auditing all bills; aided only by the advice of asylum superintendents, one of whom is to occupy stately apartments upon the grand front of the new palace. Is it any wonder that millions have been squandered on asylums and their management? Any wonder that it costs from twice to five times as much to take care of an insane person here as in Europe? Any wonder that, in New York, a board of asylum trustees at this moment stands arraigned by the comptroller of the State before the governor for wanton extravagance and other abuses? Any wonder that an incomplete asylum at Morristown, New Jersey, has cost more than $3,000, and another at Buffalo, N. Y., about $4,000 for each patient—sums large enough to have supplied an average farm, in either State, for every person in the lunatic palace, including the washwomen and the stable-boys!

That many boards of trustees, had they experience beyond that of their own asylum, would rise above the temptation of this irresponsible and vicious system, we may well believe. It is creditable to human nature that more corruption and extravagance have not existed with such opportunities. But how can economy be advanced when the officer who orders all purchases also appoints the purchasing agent, audits the bills, and reports the transaction? How can we expect salaries or the number of employés to be reduced, how can we hope that neglect and cruelty will be prevented, when every officer who can take part in reform has favorities in the asylum, and is pledged to stand by the management and to keep its damaging secrets? We might as well expect the House of Lords to surrender its prerogatives, or members of Congress to abandon their patronage, or city commissioners to reduce the salaries of their subordinates.

Despite so bad a system, however, there have been admirable superintendents and prudent trustees under it, just as under the Jesuit system there have been worthy priests, and, under our partisan spoils system, honest and capable officers; but only because so many men are better than these systems, and long for reforms from which the system holds them back.

We cannot understand the ability and tendency of this asylum system to resist reform from without until we look further to the national confederation of all its isolated despotisms. More than a generation ago "The American Association of Medical Superintendents of Asylums" was formed. Though having noble aims, it was really a combination for mutual support and self-defense by a great number of isolated officials. While producing able essays and doing much good in certain directions, the association has tended to become a power as autocratic and domineering in asylum medicine and asylum politics throughout the Union, as are the authorities of each institution behind their own walls and locks. The members of the association know, and feel compelled to keep, all the secrets of partisan favoritism, jobbing, and extravagance of which asylum trustees are guilty. Its members open and shut asylum gates to young doctors, and educate and recommend those doctors who alone have a chance of rising to the dignity and profit of an asylum superintendency. In the able organ of the association, *The American Journal of Insanity*, naturally enough published at the asylum at Utica—the recognized centre of asylum politics in New York—and edited by its superintendent, those not educated within asylum walls are sneered at as disqualified to speak of asylum affairs. That journal also lately deprecated the report of a superintendent of an asylum in Indiana, who had so fully stated asylum expenses and methods—after English models—that outsiders could judge of the doings within its walls. In the debates of the association, abuses for which superintendents and trustees are responsible are substantially ignored. Much regret was expressed when the censures of Dr. Bucknill, the great English alienist, upon needless restraints, punishment, and secrecy in our asylums, lately forced a unique debate on that subject at an annual meeting. How could it be otherwise? The superintendents represent, not the inmates, not the people, not helplesssness that needs protection, but only those in authority who maintain all secrecy, who are responsible for all that is wrong, who are interested in all that is corrupt, who are themselves the very persons who need to feel the force of public opinion and to have their doings inspected and laid open to view. A Howard or a Francis d'Assisi, as a superintendent, might expose the abuses of the asylum that employed him, or arraign a fellow-member for oppression, but, as average human nature is, it was inevitable that an association thus oraganized should crystalize old methods and abuses, and become, in itself, an obstacle to reform.

We have no space to state how far, in Massachusetts, Vermont, New York, and other States, lately, provision has been made for inspection and publicity in asylum affairs.

It is a curious fact that the very year (1845) when that association crystalized asylum despotism in the United States, the British Parliament pursued precisely opposite policy by subjecting the English system to regulation, inspection, and responsibility to public opinion, at the hands of a "National Board of Commissioners in Lunacy." It extended to asylums, both public and private, the same guarantees of fidelity and justice which we long since found essential in the analogous cases of banks, prisons, and assurance companies, and are now extending to public charities.

The board consists of eleven persons, of whom three are physicians, three lawyers, and the residue men of business. Doctors not biased by asylum sympathies are to watch those who are. Lawyers are to look to the legal rights of the inmates. The non-professional majority of the board are to stand for business economy and the humanity of the nation. A board thus constituted can hardly yield to any clique of doctors or theory of medicine. The duty of the board is to cause the light to shine on all asylum management, and to bring the doings of superintendents and trustees alike to the tests of science, economy, humanity, and justice. Pages might be filled with proofs of the good influence of the board, in the words of both English and foreign writers. Those familiar with the great reforms brought about by our recent boards of charities in almshouses, county jails, and poorhouses, can readily imagine how English asylums have been regenerated—no more despotism, no more secrecy, no more extravagance, no more lobbying, no more asylum politics.

Every house, hospital, asylum, or place where lunatics are kept is subject to the approval and the visitations of the board. The detailed rules for the government of each, and lists of the diet required to be supplied, must be hung in conspicuous places upon its walls and filed with the board. Not an inmate can be received or discharged anywhere in the kingdom without a prompt report to that body of the authority and the reasons; nor the death of a lunatic happen without an instant statement of the cause and the name of the physician in charge being sent to the board. Six times a year in most sections, and four times elsewhere, an inspection must be made by the board of every asylum, public and private. The inspections must be not only of the main buildings but of "every out-house and place," and the inspectors on each occasion "*must see every patient.*" They must make minutes of the situation "in general and particular," not only in the visitors' book of the institution, but in their own report. It is a misdemeanor on the part of superintendent or trustees to fail to show the inspectors, and of the inspectors to omit to see, *any place or person* which it is thus their duty to see! Every medical adviser who resides in or visits an asylum must enter in a case-book the bodily and mental condition of each patient, and what medicine and treatment and at what time he prescribes for him. These books are always inspected, are open to visitors, and frequently copies of them are required by the board. Every letter of an inmate addressed to the board, or to a member of it, must be at once forwarded to its address, unopened; and every other letter, if not forwarded to its address, must be speedily delivered to the inspectors for the board. Every person guilty of neglect or ill treatment of a patient is to be punished as for a misdemeanor. The humanity and justice of such provisions must commend them to the American heart.

It is obvious that inspectors of all vouchers and accounts by an independent body must tend to economy on the part of trustees and superintendents, to say nothing of having the expenses of each institution put in comparison with those of others in the annual reports of the board.

Asylums are neither built nor altered in England to suit the fancy of local trustees or superintendents, but upon plans to be approved by central authority, and with stern limitations upon extravagances. The prescriptions of treatment, the diet lists, the suicides, the punishments, the constraints of liberty, the accidents, the ratio of cures and deaths, the conduct of superintendents as shown in the calmness or excitement of their patients, in the different institutions, and the results of looking into the complaints made by letter, appear in these reports and are scored up against an institution according to its merits. It is plain enough that as checks upon arbitrary power, as incentives to justice and economy, and as sources of public enlightenment, such report must be salutary in the highest degree. By removing secrecy and mystery from asylum management, the action of the board has greatly raised asylum affairs in public estimation. Suspicion and distrust on the subject no longer exist, as in this country, and English and German alienists and statesmen see, with surprise, the dread with which our asylum authorities look upon publicity and and investigation. In those countries, such scenes as we witness would be impossible. For example: a great New York asylum superintendent, paid from the public treasuary, leaving his patients last winter locked in charge of subordinates, while he visited Albany to lead the asylum influence against a bill for the better protection of the insane; a minister of the Gospel standing but yesterday before the Senate committee before referred to, and holding in his hand a letter from a superintendent over him, which admonished him in direct words that he had passed the asylum locks *only on the condition of revealing no secrets*, and that he would speak out the facts as to abuses at the peril of his place as a Christian missionary to a public lunatic asylum in the city of New York. Such, in their decisive features, are the widely different systems according to which lunacy affairs have been managed for more than a generation on the opposite sides of the Atlantic. On the one side, the only national organization having been a body made up of superintendents and trustees, interested if not in part formed to preserve them in the exercise of their despotic power against the complaints of its victims and the protests of the public; on the other side, a body independent of superintendents and trustees alike, and both formed and interested to bring them to the bar of public opinion, and to secure for every lunatic in their care all the comfort and justice which a great nation can supply.

It is not strange that superintendents and trustees oppose such inspection and publicity. But why should they, any more than bank and insurance directors and presidents, be exempt? The wonder is, not that lunacy administration here should be more tyrannical, expensive, and distrusted than in Europe, that physical restaint and punishments should be more frequent and excessive, that suppression of letters and secrecy should be enforced, or that insanity should increase and become incurable in the degree that our asylum management has fallen behind the science and humanity of the age; but the wonder is that a humane and intelligent people should have so long, with the example of Europe before their eyes, tolerated a system repugnant to their constitutions and national spirit. We may be sure that a system so intrenched in the statutes and in professional, partisan, and local interests all over the country, will not be easily overthrown. But difficult as the work may be, the most essential step toward reform is to open all the asylums, public and private alike, to inspection and reports by an independent board (after the British model), either created separately in each State, or made up of members from several States, for a common duty. Then asylum extravagance, asylum despotism, and asylum politics will fall before public opinion; but not before. All reforms short of this must deal mainly with effects and not with the real causes of our evils.—*N. Am. Rev.*

On the Treatment of the Various Forms of Consumption. By ROBERTS BARTHOLOW, M.D., L.L.D., Professor of Materia Medica and Therapeutics in the Jefferson Medical College, Philadelphia.

I will take it for granted, as is generally believed, that there are three distinct forms of pulmonary consumption: Chronic, cartarrhal, or caseous pneumonia, which is an essentially inflammatory disease; chronic tuberculosis, with special direction to the pulmonary parenchyma, which is a diathetic malady; and fibroid phthisis, which is a chronic interstitial pneumonia ingrafted on a chronic bronchitis. It must be obvious that if this classification has a proper basis, it does not suffice to propose a plan of treatment for consumption, but our therapeutical methods must be guided and controlled by the pathological conditions. Whilst this is true, there are certain general principles of treatment applicable to all forms. I propose to consider these first—they are climate and personal hygiene.

In considering the subject of a suitable climate for a pulmonary invalid, I will not go beyond the limits of the United States, within which are contained the utmost variety, and, indeed, the perfection of health resorts for this purpose. In the absence of any statistical data showing the results of prolonged residence in particular localities which might indeed settle the question, we have some general principles to guide us, too little regarded by the profession, but of great value. We owe to Dr. Bowditch, of Boston, the eminent physician and sanitarian, the first principle, which he established for

Massachusetts, and which has been confirmed on a larger scale for England. The Bowditch generalization is, that there is a constant ratio between the number of cases of consumption and the amount of water—rainfall, and collections of water in streams, ponds, and lakes. This principle is not applicable to the ocean, where other conditions obtain. Certain parts of England, having had a large mortality from consumption, present a very different report since suitable drainage works have been put into operation. You need only to cast your eye over the elaborate Atlas of Medical Geography, by Lombard, to see how large a part excess of moisture plays in the geographical distribution of phthisis. All along the sea-coast are traced the deeply shaded lines, whilst in the elevated interior regions, the mortality has disappeared. It is true that density of population and other evil hygienic influences are at work, but excess of moisture is a large factor.

Next to dryness of soil and climate as a remedy for consumption is elevation. The fact stands out as conspicuously in the great Atlas of Medical Geography as the previously considered influence. In the elevated regions—the great plains and plateaus of India, Africa, and America—phthisis is almost unknown (Lombard, vol. iv., p. 420). Elevation has an important influence in the relief of phthisis, because the air is dry and rarefied. Breathing rarefied air lessens the intrathoracic pressure, increases the rate of the respiratory movements and the rapidity of the pulmonary circulation. Residence in a rarefied atmosphere increases the rapidity of the circulation and the amount of blood in the peripheral vessels. The influences of these factors in promoting digestion. assimilation, and tissue metamorphosis are unquestionable. Uniformity is only less important as a requisite for a climate for pulmonary invalids. The reason of this requirement is obvious. Those invalids in a condition to be benefited by out-door exercise need an equable temperature in which to pursue their sports or recreations with safety. But more important than this is the bad influence of a variable climate in causing attacks of bronchial catarrah, a morbid process so much concerned in the production of caseous phthisis. Applying these principles to the question of a climate for consumptives, I place first on the list the great plains and plateaus of our interior continent, next certain parts of California, then a limited district, of which Aiken, South Carolina, may be regarded as the centre, and lastly, the upper lakes and Minnesota, and the Red River of the North. In the limited space of such a lecture it is quite impossible to go further into details on the subject of climate.

Amongst the questions of personal hygiene, alimentation is the most important. And here, gentlemen, I have some important facts to submit to your consideration. We owe to Hughes Bennett the important practical suggestion that the initial disorders of phthisis are stomachal—that before any pulmonary trouble arises there is a period during which the organs of digestion do poor work, prepare the aliment imperfectly, and hence the nutrition of the body declines. That acute minded physiological surgeon, Mr. Jonathan Hutchinson, has investigated this, as so many other subjects, in a quite original manner, and he finds that almost universally a form of dyspepsia precedes phthisis. In fact it is a matter of common observation, that the individual is out of condition, is losing ground, and this long before the manifestations of pulmonary lesions of any kind. A chronic gastro-intestinal catarrh is present, and one of its special features is that the patient has a positive distaste for the fatty constituents of the food, and that the power to digest fats is much impaired. In a disease characterized by failure of nutrition, and in which the process of repair is so feeble, it is of the utmost importance to maintain the digestion and assimilation at the highest efficiency. There is a general agreement on this point, and hence no sooner is the diagnosis of phthisis arrived at than the injunction of active feeding follows. Without any attempt at correcting the morbid state of the digestive organs, they are plied with the richest hydrocarbons, with a tablespoonful of cod-liver oil before each meal, by way of appetizer, and a tablespoonful or more of whiskey after meals as a digester. It results from this method that the appetite is utterly destroyed, and the food, swallowed with disgust, is either rejected or remains to distress. I hope you will always bear in mind that it is not the quantity of food swallowed, but the amount digested and assimilated which is important to the welfare of the individual. The diet, then, should be carefully regulated to the requirements of the individual. Let me now give you a practical hint, on which you will be able to act with great good to your patients. *A period of rest to the stomach by a minimum diet will enable the organ to recover from the morbid state, and will induce a great appetite.* Acting on this rule, I have repeatedly effected great improvement in the condition of phthisical subjects at the initial period. Put the patient on milk for a week or two, and then gradually construct a suitable dietary. To remove the condition of gastro-intestinal catarrh there are several remedies on which we may rely with confidence. Arsenic stands first, probably, and is to be given in small doses —two drops—three times a day, before meals. Scarcely inferior to arsenic is the combination of iodine and carbolic acid: ℞. Tinct. iodinii. ʒj. acid. carbol. ʒss. M. Sig. One or two drops in a tablespoonful of water three times a day, before meals. The oxide and nitrate of silver are also highly serviceable, but unfortunately they cannot be continued long, owing to the danger of argyria. The mineral acids, if the digestion merely flags, or if the previous remedies have been taken for a sufficient time, are very important remedies. I have seen some striking results from the use of the nitro-muriatic acid during the initial stage, but the action of this remedy in changing morbid states of the mucous membrane and in promoting appetite and digestion is the secret of any curative power it possesses. The alkaloid strychnia, dissolved in diluted muriatic acid, makes a useful combination, for strychnia is probably the most effective agent which we possess for arresting the vomiting of phthisis.

If the morbid state of the mucous membrane has been removed, and the appetite restored, then we may consider the question of forcing the nutrition by increasing the performance of the assimilative organs. Now we may give cod-liver oil, and aid its digestion by the administration of malt liquors or alcohol in some form: It should be given after meals, to be digested and assimilated with the other foods. It is a great error to administer the oil, as is so often done, on an empty stomach and some time before the meal, because it will spoil the appetite, and keep the stomach at work during its proper period of repose. Furthermore, the quantity of oil taken should rarely exceed a teaspoonful, for this amount only can the digestive organs properly assimilate at one time. If it impair the appetite and cannot be digested it is useless, and should not be continued. Bernard has put us in possession of an important fact, which ought always to be utilized—that is, that ether promotes the digestion of the oil when administered with it. Bernard's notion was that ether increases the flow of the pancreatic juice, and must therefore promote the emulsionizing of the oil. Whether or no the theory be correct, there has been accumulated sufficient testimony to show that the digestion of the oil is much more easily and perfectly accomplished by the addition of some minims of ether.

To what extent is the administration of alcohol desirable and proper in the treatment of phthisis? First of all, we should take our position firmly against a too prevalent notion that whiskey is in a certain degree antidotal, and that any case of consumption must be cured if only it is given early enough, and in sufficient quantity. This mischievous fallacy is so far from true, that we now know a form of degeneration of the pulmonary parenchyma is produced by alcoholic excess. Before hectic comes on, as a rule, the extract of malt and malt liquors are preferable to whiskey and brandy. When wasting proceeds rapidly, and destruction of the lung tissue is going on at the same pace, when the fever approaches more and more the septicæmic type, the stronger liquors are better, but at any period whiskey should be given instead of malt liquors, if it agrees better. Is there any guide to the proper administration of alcohol? I am perfectly clear that these are well-defined principles: That quantity of spirit which increases the appetite, and improves the digestion, is the proper quantity. An excess is hurtful, because the alcohol precipitates the pepsin from its solution in the gastric juice, and therefore suspends the production of peptones. A large quantity taken on an empty stomach is without influence on the digestion of foods, and whilst it affects the mucous membrane injuriously, after absorption acts on the hepatic cells. These reasons seem conclusive in favor of a moderate quantity of alcoholic food—say half to an ounce of whiskey—taken after each meal.

I will now pass to the consideration of particular forms of phthisis.

You have seen recently several cases of caseous phthisis, in which there were considerable areas of infiltration; the period of inflammation had passed, and the products accumulated in the alveoli of the lungs were undergoing caseation. Now the problem for solution in these cases is, how shall we obtain the softening and extrusion of the caseous material without destruction of the pulmonary tissues? Although it is generally held that we possess no direct means of acting on these caseous deposits, and that they can be removed only by the improvement which we may effect in the bodily condition, I have reason to believe that we can reach and act on them to a considerable extent. The salts of ammonia have the power to increase the alkalinity of the blood, to prevent coagulation of fibrin, and to dissolve the albuminous exudations. Whilst the remedies were administered I have repeatedly observed the absorption and disappearance of caseous deposits. It is obvious the smaller in extent and the more recent, the more amenable to the action of the remedy. Probably the best mode of administration of the ammonia is to dissolve the carbonate in solution of the acetate (gr. v-x- ℥ ss), or when it is desirable to give the iodide with the carbonate, they may be administered in an emulsion together. The duration of the administration will be governed by the effect on the caseous deposits and by the forbearance of the digestive organs, but the remedies must be used for many months in most cases. By giving them properly diluted before meals, and allowing the stomach periods of rest, they may be continued for lengthened periods without ill results.

The range of temperature, and the amount and kind of interference required, are very important subjects. With regard to the character of the fever it must suffice for me to insist upon the fact, which I have often stated, that the febrile movement of the stage of exudation and deposit is different in character from that of the period of softening and extrusion. The former is inflammatory; the latter septicæmic. During the inflammatory stage we are concerned to employ means to lessen exudation, and to favor its immediate liquefaction and discharge. These means are quinia, digitalis, aconite, jaborandi, etc. When, however, the alveoli are blocked with the caseous deposits our attention must needs be directed to secure a favorable disposition of this material. When the caseation is completed there is a temporary subsidence of the active symptoms, which may continue for some time; the fever abates notably or disappears; the general state correspondingly improves; the cough is less troublesome; the expectoration slight; and there is, in fact, a delusive appearance of returning health. The scene changes when the process of softening begins, and moist sounds are audible in abundance where bronchial voice and breath were heard a short time before. Now there is an extensive area of pus formation, and the fever which attends it is a septicæmic fever. Observe the attendant phenomena; there is a daily sensation of coldness, of chilliness, or a distinct chill, some time during the morning, and for a short time before it the temperature had been at normal or even below; then a fever comes on, the mercury rising to 103°, 104°F.; and the whole process terminating in a profuse sweat. In respect to this fever the practical point I wish to impress on you is, that the best means of keeping down the temperature are rest, and the administration of remedies to restrain the sweats, and to quiet the cough. By rest I mean a condition of repose without exercise, except such muscular movements as are required in dressing, in walking from one room to another on the same floor, etc. There are sound physiological reasons for this recommendation. Rest lessons the consumption of material, the wear of tissue, and the production of heat, and conversely exercise increases the consumption of material, wastes the tissues, and increases the production of heat. Applying the physiological data to the subject before us, I must admit that exercise is theoretically prejudicial to the phthisical suffering from septicæmic fever. I have made a number of careful observations with a standard thermometer to ascertain the effect of exercise on the daily temperature of consumptives in the stage of softening, and I have noticed a rise of from one to two degrees. Any observant physician, whose attention is directed to it, will not fail to perceive the disastrous effect of persistent exercise in respect to an exacerbation of all the symptoms. Whilst I thus strongly insist on the necessity for rest when there is any considerable elevation of temperature in phthisis, I do not mean to apply this dictum to all cases. In the cases of incipient phthisis, fibroid lung, and chronic forms, with little fever, I advise an outdoor life, and exercise consistent with the stamina of the individual. Experience has abundantly shown that in cases of consumption at the initial stage, an outdoor life of some considerable exposure, indeed, is permanently beneficial. Furthermore, gentlemen, I must relieve your minds of the impression, if you have received it, that I mean by *rest*, confinement to the foul air or other evil hygienic influences of the sick room. By no means. Rest is not incompatible with constant, or nearly constant, exposure to the external air, and this I always insist upon in prescribing the necessary regimen.

I come now to another symptom—cough—which usually taxes severely the resources of the physician. As cough prevents sleep, destroys rest, and is exhausting, the patients are clamorous for relief. Much coughing is a peculiarly severe form of exercise, and demands suppression or amelioration for this reason. The expedients are almost past computation—a sure indication both of failure and intractability. The reflex irritation proceeding from the fauces may be allayed by a gargle of bromide of potassium, by brushing over the mucous membrane a one per cent. solution of carbolic acid, or by atomizing a solution of morphia. The combination of diluted hydro-bromic acid, and spirit of chloroform proposed by Dr. Fothergill, does very well sometimes, but in general is disappointing. In fact there are no efficient substitutes for opium, and we must turn to this when the cough is severe and persistent. The most generally useful of the preparations and derivatives of opium is codeia. The grounds of its utility in cough, are these: it has a selective action on the pneumogastric nerve, allaying irritability of its end organs; it is calmative and hypnotic, and as compared to morphia is less excitant and less nauseant. Codeia is adapted to those cases in which the cough is largely nervous. It may be combined with strychnia when there is vomiting, and with atropia or picrotoxine when the sweats are profuse. The following are examples: ℞. Codeiæ sulph. gr. x. ext. hyoscyami ℈j. M. ft. pil. no. xx. Sig. One pill every four hours. ℞. Codeiæ sulph. gr. xvj, strychniæ sulph. gr. j, atropiæ sulph. gr. ⅛, acid, sulph. dil. ʒ ij, aquæ ʒ vj. M. Sig. Ten to fifteen drops three times a day. Morphia may be substituted for codeia in any of these prescriptions, by reducing the quantity one-half. Carbolic acid exercises no little influence over cough, expectoration, and fever, and is most serviceable in allaying the reflex vomiting. It is best given in solution, as follows; ℞. Acid. carbolic. gr. viij, aquæ lauro-cerasi, aquæ āā ℥ i. M. Sig. A teaspoonful every four hours. Carbolic acid is especially indicated in the fetid expectoration of bronchiectasis. In the cough of fibroid lung, and of the stage of deposit before softening in caseous pneumonia, I have had excellent results from the administration of iodide of ammonium in the wine of tar. R. Ammonii iodide ʒ ij, vini picis liquoid. syrp. tolu āā ℥ ji. M. Sig. A teaspoonful.

Now, gentlemen, I come to the last topic which I can discuss to-day—night sweats. This is both an interesting and an important subject. It is interesting because of the striking results obtained by some new contributions to our therapeutical resources, and important because of the baleful influence of the sweats over the progress of the disease. If the sweats are profuse, there is an actual loss of material, of salts and organic matter, which represents waste of tissue. It is highly important to check this waste and preserve the material for the nutrition of the body. Until the recent observations of Dr. Murrell proving the great value of picrotoxine, atropia had the first place as a remedy for the night sweats of phthisis. I have usually given atropia with strychnia and morphia for the triple object of arresting the sweating, allaying cough, and stopping the reflex vomiting. It is not a little remarkable that the temperature is generally reduced by the combined use of these remedies. I have preferred to give the atropia with regularity three times a day, because of an influence over the progress of the disease, which seems to be independent of its anhydrotic power, and which can be explained only, on the supposition that it has the power to improve the nutrition of the lungs. Its introduction into use as a remedy for phthisis, has put a new phase on the prognosis of cases of caseous pneumonia, not advanced to the stage of softening. Some practitioners prefer to give atropia in a single full dose (1.60th of a grain) at bed hour, but the results are better, if given in a small quantity (1.200th of a grain) the effect being distributed through the day. The susceptibility to the action of atropia varies greatly, and as immense discomfort may be produced by a medicinal dose, care is necessary to avoid unpleasant results. Recognizing the importance of the influence which atropia appears to have on the trophic system of the lungs, I have had patients take it for years at a time, and without any ill effects.

The success of picrotoxine as an anhydrotic has been quite decided. Dr. Murrell finds that so small a quantity as the 1.200th of a grain, given at bed hour, may arrest the sweating for a number of days. Although possessed of properties somewhat like those of strychnia, it is by no means so powerful, and may be given by the stomach up to 1.30th of a grain. Dover's powder, and, oddly enough, pilocarpine occasionally acts, very decidedly as an arrester of perspiration—a capital illustration of certain kinds of physiological antagonism. But pilocarpine cannot be depended on for constant service. Take it all in all, atropia should be perferred in most cases, because of its apparent influence over the nutrition of the lungs. Whilst atropia is given, three times a day, picrotoxine may be exhibited at bedtime, if the effect of the former is inadequate.

There are other important topics connected with the treatment of phthisis which I would gladly enter on, if there were sufficient time, but in the facts I have laid before you will be found the main points from which the details may be easily derived. You will find, indeed, that treated according to the principles I have just developed, many cases of phthisis will be conducted ultimately to a safe termination, and you will learn to look with more hopeful confidence on the success of your management than you have probably done heretofore. — *Medical News and Abstract.*

ABSTRACTS.

"Qui e nuce nucleum esse vult, frangit nncem."

Clinical Notes On Duchenne's Disease.

By S. Weir Mitchell. M.D.,

I believe that a good deal can be done for this disease ; but nothing ever done for it has, in my experience, led to an absolute cure.

It is clear that in this, as in most

spinal disorders of an inflammatory nature, there is a constant element of mischief—the sclerosis—which, once in possession, seems implacable ; and also there is a congestive element, which varies in amount and intensity, and may thus be called on to account, by its variations, for some of the changes, reliefs, and abrupt gains which at times surprise us and inspire physicians of sanguine temperament with the pleasant belief that they are curing a case of sclerosis.

Most ataxies in this country resort, soon or late, to the hot springs of Arkansas, as, a few years ago they used to go to Gettysburg. I have seen no instance of good from either spa which was not temporary and really due to change of air, while I have seen only too many cases which were more hurt by the long and tiresome journey to Arkansas than helped by the alteration of their surroundings.

But in what direction shall we turn? The question opens a large and possibly, in the future a fruitful field. We know but too well that when this sclerosis is in full possession we can do but little. We then naturally ask ourselves whether, in the earliest stages of the disorder, treatment, might not be more efficient, and are met by the statement that the earliest signs of posterior sclerosis are :

1. Troubles of the motor apparatus of the eyeball.
2. Slight urinary troubles.
3. Neuralgia.
4. Vertigo.

One, two, or all of the four may be the primary signs of mischief, and constitute the first evidences of a malady which in time develops itself in the shape of defective equilibration. The criticism which I feel called upon to make is twofold. First, I may say that, as a rule, the primary lesion which calls attention to the existence of this disorder in the body is usually the eye-trouble or the neuralgic pain, or more rarely, vertigo.

As regards treatment by drugs, I am sure that I have seen, over and over, good result from two drugs—nitrate of silver and iodide of potassium—and of these the latter has given me the best results. Nor can I say that these were seen only in cases of syphilitic origin, my belief being that, even if sclerosis have been a sequence of syphilis, it is in no respect made thus more easy of cure. In fact, some of my best results have been won in scleroses where there was no reason to suspect a specific origin. In one case, a physician, the gain was from inability to walk unaided up to full power to walk without help or even a cane. In another, also in my care just now, the improvement was as great. I have seen the largest gain in cases of habitual drinkers, who became entirely abstinent men while being treated, with one or two-drachm doses of iodide.

The question of hygiene is the next question which arises.

There is a period, often a long one, in which the ataxic is able to enjoy life to a considerable extent before his powers of locomotion fail. It is in this stage of the disorder that it is most important for him to live by certain rules, which are not at all those which should govern healthy people.

Heat and Cold.—Ataxics vary strangely as to their power to feel the influences of temperature and of storms, but, as a rule, it may be assumed that they are more sensitive than well people.

The great heats of our summers are very hurtful to these patients, and no class of people seem to benefit more and more plainly than they by changes of climate. The situations which suit them best in summer are moderate elevations, such as the foot-hills of the Alleghanies, or Saratoga, or the Adirondacks. The seaside or cold sea-baths are undesirable.

Clothing and Warmth.—The general sensibility of ataxics to storms and cold makes it, therefore, needful for them to exercise unusual care in avoiding abrupt changes of temperature and in watchfully suiting their dress to the season. I have known some sufferers from ataxic neuralgia who thought they found comfort in wearing buckskin over a thin under-dress. It is also desirable, in persons who can move about so little as some of these, that they should have, in winter, the great advantage of the radiant heat of an open fire rather than a baked furnace-air, which, by drying the surface, causes so much cooling, by evaporation, as to make a very high temperature essential to comfort.

Exercise.—The question of the hygiene of exercise in posterior sclerosis is a very interesting one from more than one point of view. It would seem probable that excessive over-exertion ought to be a fruitful cause of this disease. I can recall but one case in which it seemed to be so, and in this the patient was also exposed to cold.

On the whole, it may be said that all of this class of persons should sedulously avoid fatigue, and that many of them are the better for not walking at all.

I usually advise the patient very early in the case of the risks of fatigue; and, whether or not I advise a period of absolute repose, I make prominent the necessity of avoiding exercise. If at any time I see a tendency to rapid loss of power, or if to walk is clearly hurtful, I advise some form of crutches or other support, and I advise them long before the patient feels them to be essential.

The evil which comes of such rest as is either desirable or enforced by the growth of the disease may be lessened by having the patient well rubbed once a day. I should prefer to say kneaded, but really no one word expresses what the process should be when we desire to stimulate skin, muscle, and joints. The objects are to excite locally the circulation to empty thoroughly all the vessels within reach, to flush the whole limb so as to raise its temperature, and to stimulate vigorously the muscles so as to give them, at least for a time, the tone they lack.

Digestion.—I do not think that the ataxics are especially liable to dyspepsia, apart from the ferocious gastro-intestinal attacks, which seem to come and go without known cause, or are, in a few persons, caused by storms or exposure. They are able to eat and digest much as others are, but they usually are forced to take aperients from time to time. A pill of aloes and iridin, or of aloes, oxgall, and belladonna, answers usually, or suffices if aided by an enema.

Sexual Hygiene.—The hygiene of the sexual organs is a far more important matter. Some of the French observers ascribe a large proportion of cases to sexual excess, and it is certainly true that many ataxics confess to over-indulgence; but, on the other hand, an increased sexual appetite is one of the very first signs of the onset of this disease; so that we may readily mistake an effect for a cause. I may here note, as a curiosity of this subject, that two of the very few ataxic women I have seen suffered for a year or more from dreams of coitus before any other notable symptom declared itself. In them, as in men, these erotic dreams gave rise to the most extreme exhaustion.

In some few cases the loss of virile power comes very early, and is well marked; but I know of many ataxics who have had children since their disease was well marked, and it is possible to meet with cases, like one I have seen within a week, where the paralytic stage has been reached without loss of virility. Where sexual intercourse is injurious to ataxics it is usually no doubtful injury, and is followed by nightly pollutions, by sense of exhaustion, by pain in the loins, and sometimes by attacks of neuralgia. In rare cases none of these effeets ensue; and in either case the proper course is clear enough.

Bladder.—As a case advances, the utmost care is needed in regard to the bladder. It is apt, soon or late, to become feeble; retention of a portion of urine, with decomposition of the secretion, follows; then cystitis of a low type results, and but too often this is the beginning of the end. At the least sing of trouble it is well to use the catheter, and to train the nurse or patient to its use.

Tobacco.—Tobacco has a decisively hurtful influence on most ataxic patients, causing, in some of them, the most remarkable increase of nervousness, and temporarily impairing locomotion. It were best avoided altogether.

Duration.—It happens to everyone to be asked how long a given case of posterior sclerosis will last, and to what extent the capacity to use the brain will be lost. The latter question is easily answered. I can now recall ataxics engaged in pretty active business, as lawyers, or merchants, or clergymen, or doctors, whose sole incapacity arises out of their pains and their lack of muscular coördination. As to how long a man will live with ataxia is a harder question, and we have no clinical material to help us to definite answers; I mean that nothing about the character of the onset is predictive of the duration of the malady.—*Philadelphia Medical Times.*

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CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

A Case of Extra-uterine Pregnancy Terminated by Laparotomy Thirty-Nine Months After Conception—Ulceration from the Sac Containing the Fœtus into the Alimentary Canal—Complete Recovery. By JUDSON DAVIE, M.D., of Spring Hill, Barbour County, Ala.

The case herein reported should have been placed upon record some years ago and so far as I knew, for a long time, had been done; for it was agreed between Dr. M. S. Davie (who was also connected with the case) and myself, that he should send a statement of it to some medical journal for publication.

He moved, however, some time afterwards to the State of Texas and it was only of comparatively recent date, upon his return again to this section, that I learned he had never done so.

After conferring with him in regard to the matter recently, I take pleasure in placing before the medical profession, the most remarkable case it has ever been my privilege to witness.

The notes of the case taken at the time have nearly all been lost, *i. e.*, so far as details are concerned; consequently only somewhat of an abridged report can be given; nor do I deem it necessary to go into the minutiæ of the case.

The main facts have been carefully preserved and are, in every particular, correctly stated in the following report.

Martha Dallas, colored, married,

aged 30 years, *i. e.*, at the commencement of the time mentioned in this report.

She had previously borne two children; both pregnancies and both labors being normal in all respects.

In the early part of the year 1869, she conceived with child for the third time.

About the middle of October of that year, her pregnancy having gone on till then as usual, without suspicion of anything seriously wrong, except that her general health had not been so good as in her other periods of gestation; suffering at times "some kind of curious pains," was taken in labor, as she supposed, and sent for a physician.

Upon the arrival of that physician, Dr. W. B. Temple, now residing in the State of Texas, he found her having convulsions which continued at longer or shorter intervals for more than twenty-four hours.

After examination, general and special, he found the womb to be of the *usual unimpregnated size*—in short, discovered the case to be one of extra-uterine fœtation—of the abdominal variety, I suppose; for I think it very unlikely that a case of tubal pregnancy should go to *full* term of gestation without giving rise to grave symptoms; and it was my opinion subsequently when the case was operated upon, that it was neither tubal nor interstitial, but abdominal in its nature.

In regard to the vitality of the child I can glean nothing, except that its movements were said to be strong and active up to the commencement of the so-called puerperal eclampsia.

I take it for granted, however, that it *did not* perish till then, and that it *did* perish then, for when examined in this respect a day or two afterwards by a couple of competent physicians no evidence of vitality could be elicited by auscultation or otherwise; and when the child was subsequently removed by operation, it had the appearance, so far as we could judge, of a child who had lived until its term of utero gestation was completed—but I am anticipating.

In spite of the best efforts of the physician first called in, the convulsions continued, hour after hour, when finally worn out, after many faithful and fruitless endeavors to stay the malady, he abandoned the case as hopeless and left her as he supposed moribund.

But she did not die—she lived on and on, until the convulsions finally ceased to return, and it was at this junction that Dr. J. B. Pouncey, now of Union Springs, Alabama, and Dr. M. S. Davie, now of Clayton, Alabama, then practicing together at this place, were called in, and after a careful examination, corroborated the state of affairs as discovered by Dr. Temple, and described above. In the mean time, after remaining in a comatose condition for a number of hours, the patient gradually regained her mental faculties, without any paralysis.

As there was no life in the fœtus, and as there was a considerable quantity of fluid contained in the cyst, or sac, or cavity with the child, her physicians decided to tap her, which was done with an ordinary trocar. Once after this they again tapped her, thus relieving her in the two operations, of most, or quite all of the liquor amnii, which lessened its weight, reduced the size and inconvenience of the abdomen some, and possibly diminished the danger of a ruptured sac in the future progress of the case.

Laparotomy was proposed then, but as the patient was in an exhausted condition, and her family and friends opposed it, the measure was abandoned, and she was left to take her chances without it.

She was placed, however, upon such measures of treatment as seemed best suited to her condition, and after so long a time her health was improved to such an extent that she "got up and about," and remained so until the early part of the year 1872, when her health began failing her and she retrograded fast.

During this interval she menstruated a few times, at long and irregular intervals; she also had several malarial attacks; but the main trouble remained in a state of abeyance. About the 1st of April, 1872, Dr. M. S. Davie and myself formed a copartnership, when my attention was first called, by him, to the woman with the history I have already described.

She had recently applied to him for treatment again, and we arranged to take charge of her case at once, as she was bed-ridden and still rapidly declining. Upon our first visit we found her very much emaciated and worn out; unable even to sit up in bed. Her brain and heart, and lungs, evidenced no disease; her stomach and bowels were disturbed; her urine was scant and high colored; her liver torpid; her womb forced low down in the pelvis; her nervous system exhausted; her abdomen still prominent with the extra uterine fœtation, and greatly distended with gaseous accumulations; her pulse small, feeble and fast; her temperature high, with profuse sweating at night; and her general appearance was that of blood poisoning—in short, without detailing further symptoms, her condition was truly desperate. It seemed as if the last stage of the drama was close at hand.

After carefully examining the case, we deemed the fœtus in a state of decomposition, which accounted for her rapid decline and poisoned condition. Why disintegration had set in with such vehemence at this late day, we were unable to explain then; but the mystery, as will be seen, was soon explained in a clear and forcible manner.

Amongst other measures of treatment, we discusssed the propriety of laparotomy; but after careful consideration we agreed that the most likely result would be, that our patient would die upon the table, and as death bid fair to end the scene in a short time, we desisted from any interference calculated to precipitate such an event.

But in this we were mistaken, for she lived on under circumstances that ordinarily seem incompatible with life, and we ought to have operated at once. Her entire system seemed to have became *so accustomed* to the slow inroads of disease *gradually* encroaching upon it, that it possessed a degree of endurance and resiliency well calculated to deceive and to be overlooked.

Several days after our first visit, we were shown a stool which she passed the night before, and in which was mingled, unmistakably plain, the hair from the scalp of a child. This of course demonstrated beyond all question that an ulceration existed between the sac containing the fœtus and the alimentary canal, and which also threw light upon the decomposition of the fœtus, and rapid decline of the patient. The gases of the intestinal tract had found their way into the cavity containing the child.

The next day after the passage of the hair from the bowels, a couple of bones from the fingers or toes passed; and then came purulent, offensive discharges occasionally with the actions from the bowels.

But time wore along, and the flickering flame of life did not disappear "in finale" as we daily expected it would do, and in the mean time we continued giving our patient, at stated intervals, as much nourishment as her stomach would tolerate ; we stimulated her with brandy and we kept her resting with opiates, and, in short, left nothing undone calculated in any way to benefit her, and I suppose did benefit her, but it looked very much like trying to "fetter flame with flaxen band," until at length the 9th day of April came.

We had been hesitating to undertake an operation with so little promise of success, till now ; but to-day we decided to operate, let the consequences be what they may, for upon examining our patient, we found her in as good condition as she had been for the past several days, and we also found, at and below the umbilicus, a bulging above the rest of the abdominal surface, and having a softer, thinner feeling, as if nature had taken the matter in hand, and was starting about performing laparotomy for us, and who can say what the result might have been ?

After fully preparing our patient with brandy, opiates and anæsthetics, we proceeded to make an opening in the abdomen by commencing our incision at the highest point of the bulging spoken of, above the umbilicus, and carrying it down in the median line for several inches below.

Upon making an opening into the cavity containing the child, the fœtid accumulation of gas poured out in great quantity, possessing the most intolerable odor, I think, I have ever experienced. The odor of the cadaver in the dissecting room would have appeared as "Esprit de Millefleur" in comparison ; but excuse me, I am digressing, I only meant to say that the odor was indeed very bad.

After opening wide every window and door connected with the apartment, and after waiting a few minutes for the foul gases to escape, we again commenced work to remove the decayed, putrid mass, of the child, and the work was decidedly slower than might have been expected, for as we would grasp any portion of the child, which had its back to the front, with its feet downwards, the flesh would slip from the bones, and the bones pull apart from their connection with each other.

After some trouble, however, we finally succeeded in getting the body of the child, minus one or two of its limbs, which had been pulled off, *through* the opening we had made, while its neck was *engaged in it*, with the head still remaining in the cavity.

Thus far we got and could go no further without enlarging the opening, or severing the neck and taking away the head by piece meal, which we could easily have done, owing to the decayed condition of all the structures, and which we decided upon doing, as we did not wish to lose a single drop of blood that could be avoided, when the patient began sinking—dying as we at first supposed ; but as she had deceived us so many times before in this respect, we suspended our operations, after severing the body from the head, which was the work of a few seconds only, and went to work at reviving our patient with hypodermic injections of brandy, hot applications to her extremities, warm covering, lowering her head and artificially assisting her feeble efforts at respiration, &c., which, after so long a time, brought about partial reäction.

We then decided, as the reäction was only partial, and as her condition seemed so precarious and not knowing how much difficulty we would have in removing the head, to keep her as comfortable as possible, and wait a few hours before proceeding any further.

So, placing her in a favorable position for drainage, and folding a cloth several thicknesses, saturated with carbolic acid and water, placed it over the wound without attempting to close it, and left her until the next morning.

Upon our return the next morning, April 11th, we found the patient in as good condition as she was the day before, prior to the commencement of the operation, and we imagined better.

Without enlarging the opening we had made the day previous, we succeeded, after some manipulation, in removing the head in a flattened collapsed condition. The child was a female.

We could distinguish no placenta; but a large quantity of thick, offensive discharge followed the removal of the head.

The patient bore the manipulation better than we expected; she was fortified only with brandy; no morphine, no chloroform or ether, as on the day before.

We made no effort to remove the the cyst or any portion of it; nor did we try to inquire into its boundaries or attachments. The main cavity seemed to be high up in the abdomen, clear of any connection with the pelvic viscera.

After sponging out the chasm as well as we could, we wet large pieces of lint cotton with a solution of carbolic acid and water, and placed into the cavity until it was filled; then a folded cloth saturated in the same solution was placed upon the wound externally, and confined by a bandage. No closure of the wound was attempted.

The dressings were removed, the cavity sponged and fresh lint applied twice daily for many days, until the *cavity* became so small and the *opening* externally so small that only a fistulous tract was left, when any attempt at placing dressings into the cavity was abandoned entirely.

Whether the plan of treatment adopted after the operation was the best one that could have been instituted, may be open to question; but such are the facts, and the facts in the case are all that I am trying to describe.

I should, perhaps, here state, that the upper and lower ends of the incision healed in a few days; but that portion described prior to the operation as bulging above the general surface of the abdomen, and having a softer, thinner feeling, did not heal, but sloughed some, which made a ragged opening just below the umbilicus, and it was this place externally that was so long in healing.

Time wore along and our patient gradually improved and grew stronger, and as above stated, the great chasm grew less, and the opening in the abdominal walls grew smaller, until under the administration of tonics, brandy, beef-tea, milk, &c., she was so much improved that she could sit up, when a more liberal diet was ordered.

Her bowels acted only at long intervals and in small quantities, while the discharge from the abdominal opening was more profuse than there was any apparent cause for, and knowing that an opening *had* existed between the bowels and the cyst, which had contained the fœtus, we naturally suspected that the larger portion of the contents of the bowels were passing through this course, and upon a closer examination into the nature of the discharge, we found this opinion correct, and unmistakably so was this the case when more solid diet was allowed, for the nature of the discharge was such that it was not difficult to tell what she had eaten. It is barely possible that the ulceration communicated with the stomach, but I think not, as it was generally a couple of hours, or longer, after a meal had been taken before any portion of it made its appearance at the abdominal orifice.

This state of affairs lasted for several months, and we greatly feared that the fistulous opening, so to speak, would be permanent; but after her general health, to a great measure, was restored, and she was able to go about again, the discharge, by degrees, grew less, and the external opening grew smaller, and the bowels acted correspondingly more *per vias naturales*, until finally the discharge stopped entirely, and the abdominal opening grew entirely up, when the patient was discharged as well.

Perhaps I should here state that about six months after the operation she began to menstruate again, and has been as regular as usual. I saw her a short time since in good health; but she told me upon inquiry that she had now conceived again.

I have not reported this case for the purpose of demonstrating any new or strange plan of dealing with such troubles, nor for the purpose of intimating any special skill on the part of her medical attendants, but for the sake of the case, *per se*—because I think such cases ought to be placed upon record as landmarks in the event of similar troubles.

That there were blunders made in the management of the above case, I freely admit, as for example: I think the case ought to have been operated upon in the *early* part of 1872, when her health began rapidly declining, instead of waiting until in April, when she was reduced to the very verge of the grave.

That her recovery was due mainly to a dogged tenacity of life, that perhaps is not found in one person out of twelve, I also admit, and, for one, am thankful that she was so endowed.

In conclusion I will intimate my views in regard to the best mode of dealing with such cases.

When we look into the literature of the subject, we find that by far the majority of them have died—those operated upon as well as those that were not.

That this is true, I think, will not be contradicted; neither that the situation is a dangerous one and that the prognosis is an exceedingly unfavorable one.

This being the case, we ought to bear in mind the fact that it is our duty if we cannot procure life upon the terms we desire for our patients, we must take it upon the terms we can get; consequently, I, for one, say that if a woman has an extra uterine fœtus that is *not* in a stage of development in her, and her life is not in *immediate* peril, it is our duty to let her go on till perilous symptoms do threaten before operating; because in operating we certainly do imperil her life.

Let me be clearly understood—I consider any woman who has a living, developing, extra-uterine fœtus in her, in a perilous situation.

I certainly make a distinction between a fœtus that is *developing* and one that is not, or, that in other words, has perished, for it is reasonable to suppose that any cyst, or sac, or cavity extra-uterine that has carried a child to any stage of development *without damage* to the mother, will continue to do so indefinitely, provided the growth and development of the child be ended.

The case just recorded above carried a child at full term for at least two years without dangerous symptoms manifesting themselves; but the most favorable and satisfactory cases that I have yet seen mentioned, treated after the line of thought here followed, are those reported by Dr. Joshua G. Allen, in which he recognized *at an early date* two extra uterine pregnancies, and in which *development was arrested* by repeated applications, of the electro magnetic current. This was done respectively in 1869 and 1870. One of the women has since borne children, the other has not; and so far as I can learn they both still carry their extra uterine fœtus.

I have a clear conscience when I say that I do not think the welfare of the child ought to be considered in these cases. That I consider it our duty, when such cases are detected, to put a stop, if possible, at once, to the further growth of the fœtus; this being done, then wait till the urgency of the symptoms demand it, and operate, remembering always that *every case in medicine must be treated as its own symptoms demand.*

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MEDICAL SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

PHILADELPHIA COUNTY MEDICAL SOCIETY. — *Soluble Compressed Pellets. A New Form of Remedies for Hypodermic Use.* A Paper by H. AUGUSTUS WILSON, M.D., Surgeon in charge of the Eye and Ear Department of St, Mary's Hospital; Assistant, Medical Clinic Jefferson College Hospital,

Solutions for hypodermic use have, been very generally abandoned because the *penicillum*, which so soon forms, renders the use of medicines in this form uncertain, if not dangerous.

Because of the danger and uncertainty, as well as the inconvenience of carrying the medicines in solution, the profession has resorted, where practicable, to the use of powders, which are carried either in the hypodermic or pocket case.

It is as a substitute for the latter that I propose the new form of soluble compressed pellets, because of their convenient size and certainty of contents and action. I have confined my experiments to the salts of morphia because it is the drug most frequently used hypodermically, and because I felt confident that if I could succeed with this drug it would be but a simple matter to place in the same form other remedies, such as strychnia, arsenic, apomorphia, etc.

I would here say that Dr. Lawrence Wolff, the well-known pharmacist, has aided me very materially in perfecting the form and in the numerous experiments which have been made.

The result of our first attempt to obtain a soluble pill I now show you. Besides the morphia it contains one-quarter of a grain of white sugar; but the moisture necessary to roll the pills rendered them difficult to dissolve when required. Then the compressed form was tried with sugar; but the smarting, burning pain which immediately ensued led me to believe that the sugar was an irritant to the tissues, and, instead of aiding, really interfered with the process: therefore sodium chloride was substituted, which I found had not the disadvantages of sugar and possessed merits of its own.

The use of the sodium chloride will be apparent when I say that if morphia salts are compressed alone they become extremely hard and very slowly soluble. Hence the necessity of mixing thoroughly, before compression, some material which at the same time shall give increased bulk, be inert, and have a great affinity for water. The sodium chloride acts as a *disintegrator*, for upon coming in contact with water it readily dissolves and leaves the morphia in a fine state of subdivision, ready to be acted upon by water. The sodium chloride. instead of causing pain or irritation, seems really to assist in promoting absorption. To accomplish the solution usually requires not more then thirty seconds, and may be brought about as follows. The syringe is charged with about twenty minims of water which is poured into a teaspoon or other convenient receptacle; the pellet, being dropped in, is crushed with the end of the syringe, to which the needle fits, and after all the lumps are broken the solution is drawn up and forced out three or four times, when usually the whole mass will be entirely dissolved and ready for use.

I have experimented with nearly all the salts of morphia with reference to their hypodermic use when combined with sodium chloride, and would express my belief that the muriate is the one to be chosen. It is the salt that the German practitioners have selected, as being less likely to change when kept for a considerable time; and as the acid is the same as that found in sodium chloride there is no chemical incompatibility. It is slightly less soluble than the sulphate; but this slight difference is counterbalanced by the greater certainty of immunity from change.

It is well known that the addition of atropia sulphate greatly increases the hypnotic and anodyne properties of the morphia salts and decreases the tendency to after-headache and constipation. I have, therefore, used this combination in all my experiments, and would suggest the following formula:

℞ Morphiæ hydrochloratis, gr. $\frac{1}{4}$, .015
Atropiæ sulphatis, gr. $\frac{1}{150}$, .0004
Sodii chloridi, gr. $\frac{1}{4}$, .015

Mix and make into compressed pill No. 1.

I claim that the advantages of this method over any other known are—

1st. The convenient size of the pellets.

2d. That they may be used by the mouth if desirable.

3d. Their certainty of contents and dose.

4th. Their certainty and rapidity of action.

Those who have used the hypodermic method and have often experienced the disadvantages of solutions and the inconveniences of powders, from their increased bulk and from the difficulty of removing all the powder from the paper, will, I trust, accept this my suggestion, and from actual use decide whether it is or is not an improvement upon existing methods.

The following discussion arose on the above paper:

Dr. M. O'Hara approved the suggestion, as he had heard it stated that powders of morphia lose their power after being carried for some time.

Dr. A. L. A. Toboldt suggested tartaric acid as an excipient, instead of sodium chloride, as it renders alkaloids more soluble.

Dr. Charles H. Thomas had been carrying morphia powders for many years, and never had any difficulty in keeping them, nor any evidence of failure, The method of Dr. Wilson, however, is an admirable one. The sodium chloride is not objectionable, as its solution is even less irritating to the tissues than pure water. This form has a marked advantage over the powders in point of solubility, especially if they have been kept for any length of time.

Dr. W. R. D. Blackwood had been in the habit of using morphia powders for hypodermic use for the last fifteen years, and was satisfied that morphia does not deteriorate at all. Moreover, in getting powders from a druggist, it is impossible to tell how long he has had the morphia on hand before dispensing it. In a case of intestinal colic he had made this experiment purposely, and could detect no difference whatever between fresh morphia and the old powders. His method is to carry morphia in one-quarter grain powders, which may be divided or increased as requisite. The syringe is filled with water, which is then ejected into a spoon, the powder dissolved and drawn again into the syringe and deposited beneath the skin. In this way the solution is definite in strength. No more is made than is necessary at the time, and penicillum is avoided. Other agents may be used in the same way. The pellets exhibited will doubtless fulfil a good pnrpose. During the last few years gelatin disks have appeared which are valuable for their portability and accuracy in measuring the dose in hypodermic and ophthalmic medication.

Dr. John B. Roberts saw a special advantage in these pellets in hospital practice, where nurses who may be careless have to administer the remedy. The hypodermic syringes are often incorrectly graduated. If solutions are preferred, however, there should be no difficulty in preventing the fungous growth by adding tartaric acid to them; but the present form has especial advantages in its convenience, easy solubility. and accuracy of dose.

Dr. John H. Packard said that for years he has been using powders of the pure alkaloid, instead of the sulphate of morphia. He never had any difficulty in dissolving them. He obtained them in quantities of fifty (half-grain papers), but never noticed any deterioration or change, even after keeping them for years. He was satisfied that there is much inaccuracy in graduating syringes. He preferred the powders, using hot water, and taking the whole, a half, or any part of one of the papers, according to the amount he desired to give, discharging the water upon the powder, and then drawing it up, performing this several times. He has had no difficulty in obtaining a clear solution. He does not, however, use the hypodermic syringe as frequently at present as he formerly did, on account of the strong objections raised against it by persons whose opinion he respects. The disagreeable effects of morphia can generally be overcome by taking a cup of strong coffee.

Dr. Charles B Nancrede spoke of a case that was very much affected by opium, where the headache and general distress were relieved by half a drachm of the fluid extract of ergot.

Dr. A. H. Wilson, in closing the debate, said that he would like these hypodermic pellets to be submitted to actual trial by the profession, in order to determine whether they are of any real value. He had experimented with different excipients upon his own person, and had found sugar and other substances are slightly irritating, but table-salt is not. The pills are accurately weighed and lightly compressed by Mr. Wolff, who had agreed to furnich them at a cost not greater than that of the powders.

For keeping several varieties in the hypodermic pocket-case, he recommended short tubes with a diaphragm in their middle and containing a different kind in each end.

On motion, a vote of thanks was tendered to Dr. Wilson for his interesting communication.—*Philadelphia Medical Times.*

STATED MEETING OF THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK. DR. A. E. M. PURDY, the President of the Society, Presiding.

A paper entitled *On a New Method of Performing Ovariotomy*, was read by Dr. E. Noeggerath, the substance of which was as follows.

The results of operations for the removal of ovarian tumors have become so satisfactory, that success is the rule, failure the exception. The question arises whether it would not be better to continue in the beaten track.

We should, however, attempt to lessen still more the deaths following ovariotomy.

The question of antisepsis is a mooted one, with respect to its observance during ovariotomy. Some consider it as an experiment only, and urge the success of former ovariotomists, but the degree of success attained was in proportion to the care taken to insure cleanliness, and antisepsis is nothing but a superior method of effecting this object. I myself do not see how a doubt can exist as to the advisability of antisepsis. One of its advantages is that patients now recover in the hands of inexperienced operators who never would have recovered without it. We should aim to surround the operation with such safe guards that unskilled surgeons may perform it without danger. Patients to be operated upon should be sent to places insuring the best hygienic surroundings. Isolating wards or cottages are admirable safeguards against septic infection.

Is it possible to make a room in a dwelling or hospital as salubrious as a cottage? I believe it is. If possible I select two rooms if not one, on the first floor and remove all the furniture, carpets, etc. Then the floor and walls are to be washed with a two and a half per cent. solution of carbolic acid, and vessels containing chlorine water are placed about the room.

The wash closet if any is to be sealed up. The mattress is to be aired. the bedding, etc., washed in a solution of carbolic acid. The furniture of the room should consist of a chair, iron bedstead and wooden table. The room should be heated by a grate fire, and a kettle containing carbolic acid solution suspended near the fire.

The adjoining chamber is exposed to the air night and day.

If we prepare everything as above and observe the rules of antisepsis, we have yet to guard against hæmorrhage, shock and septicæmia, which are the most frequent causes of death. About hæmorrhage I have nothing new to say. Shock is equivalent to loss of temperature which has been proven by experiments on animals. The elements of shock are, prolonged vomiting, contact of the fingers and instruments with the abdominal contents and the influence of narcotism.

After a trial of several narcotics, I have returned to the use of chloroform. The patient is to take a drachm of bromide of potassium on each of the two days preceding operation and on the morning of the operation thirty grains. By this method less of the chlorform is required to produce narcosis. I also give a full dose of chloral by the rectum which also diminishes the danger.

It has been the custom to perform ovariotomy in a warm, moist atmosphere as guarding against peritonitis. Instead of this I place my patients on a rubber bed filled with water heated to 100°. I find this dry heat much less depressing and more convenient of application; more easily regulated than the moist heat.

A third danger connected with ovariotomy lies in the formation of septic material in the abdominal cavity. This danger would be lessened by adopting a method by which the air, and hands, and instruments are in contact with the peritoneum a shorter time than by the present plan of operating. It is such a method as this that I follow. The new method. I raise the skin and subcutaneous tissues to the extent of about three inches, but instead of cutting through the peritoneum I plunge the trocar into the cyst and evacuate its contents. If the cyst contains pus or decomposed blood I inject into the cavity a 2 1-2 per cent. solution of carbolic acid. After emptying the cyst I depress the handle of the trocar toward the skin, this uplifts the anterior abdominal wall, which I incise, having the trocar as a guide down to the cyst wall. I then tie the pedicle and remove the cyst.

I claim that by this method the operation is simplified and the violence of shock and the chance of infection is lessened.

There are two contra indications, to the employment of this method of operating. 1st, where the solid elements of the tumor are in excess of the liquid, and 2d, where the sac is small, in which case there is danger of cutting a loop of intestine which may be in front of the cyst, but this latter condition at least can be recognized and guarded against.

This operation has been performed upon twelve persons, three of whom died. In one of these cases the operation was not finished owing to the slipping of a ligature and consequent fatal hæmorrhage. Of the remaining eleven cases all the patients below the age of seventy were saved.

AFTER TREATMENT.

In regard to the treatment of the pedicle in the large majority of instances the intra peritoneal method is the best, but in some cases drainage is the only proper treatment. For these latter cases I have adopted a new method of after treatment which consists in the use of the warm bath, the water being in contact with the peritoneal cavity. The bath is to be connected with hot and cold water and with steam pipes and arranged for the attachment of a hammock for the patient to lie in. We may use as a substitute a common movable bath tub with a double bottom, but must retain the water at a certain temperature without frequent additions of hot water.

The action of the constant contact of water in the manner described is to prevent sepsis.

A contraindication to the use of the bath is in persons very much weakened.

I employ the permanent bath as a substitute for ordinary drainage in ovariotomy, after Freund's operation, after the removal of fibroid tumors and after Cæsarean section.

Dr. T. A. Emmet said in regard to the points made in the paper that the value of antisepsis in surgical operations could not be questioned, it was important to discover how far the present antiseptic method could be simplified. In general surgery where the antiseptic method is not followed success in operating depends on thorough and deep drainage, in ovariotomy antisepsis must be observed if good results would be obtained.

The method that Dr. Noeggerath proposed of so preparing a private dwelling as to insure the best hygienic conditions for the recovery of the patient he thought practicable and feasible. The value of separate cottages and isolation he had tested and found this method an indispensable aid to recovery. Out of 33 patients operated upon 30 had recovered who had been treated in this manner, while on the other hand 9 patients who had been operated upon the year before this plan had been adopted all died.

He did not agree with Dr. Noeggerath in preferring chloroform as an anæsthetic but considered ether far safer and more desirable. As to the method of avoiding shock he could add nothing to what the author of the paper had said. He was not favorably impressed with the plan proposed of evacuating the cyst before operation, but believed that with proper assistance and care the danger of fluid entering the abdominal cavity could be guarded against. In regard to treating the pedicle by ligature or cautery, he had not made up his mind which method was preferable, he thought it still an open question. Keefe attributed his success largely to the use of the cautery. The advantages of drainage in ovariotomy are unquestionably great, but under the most favorable circumstances its use was limited, since peritonitis following the operation mats up everything in twelve hours. Where the tube was needed most, it was least applicable. With respect to the use of cold after the operation, he believed that it did not check peritonitis but checked the wear and tear. About the warm bath and other novel treatment proposed by Dr. Noeggerath he could say nothing as he had had no opportunity of observing it.—*Med. Gazette.*

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CORRESPONDENCE.

"Sit mihi fas scribere audita."

VIENNA, AUSTRIA, *Feb.* 28, 1881.

Dear Doctor:—Early last fall a woman presented herself in Prof. Braun's clinic for examination. She was then in the fifth month of pregnancy, of very small stature, being a little less than three feet high. Rachitic; conjugata vera, three inches, besides there was a general deformity of pelvis, so much so that it was decided that a child of one or two pounds could not be delivered, so the only possible remedy was to wait and perform a Cæsarean section.

Towards the end of pregnancy, she was received into the hospital so as to be on hand when the pains came on. During the night of the 28th of January, she had some pains; on the following morning, she was examined. Os hard and not dilated, fœtal sounds distincly heard, child in first position, head presentation. It was thought best to operate that day, so everything was put in good order. The room cleansed, heated, and disinfected with the spray.

At three o'clock Prof. Braun appeared, and after making some remarks, as to the mode of operating, and giving his final instructions to his assistants, the woman. who had been narcotized in another room, was placed on the table. After shaving and washing the abdomen with carbolized water, a rubber cloth, with a hole in the centre, was spread over it, and carbolized cloths stuffed under the edges. An incision, extending from a little above the symphysis to navel, was made in the linea alba, going as deep as the peritoneum, this was now raised with forceps, snipped, and then with a bluntly pointed bistoury slit upwards and downwards.

The uterus was now exposed, but could not be extracted, so carbolized cloths were pressed between the uterus and abdominal walls. The uterus was now opened by a long incision. The hand was introduced, and instead of the feet, the head was seized. Extraction easy, cord cut immediately, and child delivered to an assistant, whose duty it was to restore it to life, if asphyxiated. During the extraction of child, the uterus was drawn through the wound, and now the écraseur was placed around the neck, and tightened so as to check any further bleeding. After the adjustment of the écraseur, and all bleeding being controlled, the uterus was amputated with a knife, just above the chain. All superficial fragments were now cut off, a strong needle stuck through the stump, and the écraseur removed, leaving chain behind.

No fluid nor blood were found in the abdominal cavity, and after the wound was cleansed, it was closed with deep and superficial sutures, after which the stump was burnt to avoid long suppuration.

The dressings consisted of a small sack of absorbent stuff over the stump, a layer of impermeable stuff over the wound, over which there was placed carbolized gauze, then came layers of carbolized cotton and jute, and over all the binder. Jute and cotton were stuffed in all holes. The woman was then transferred to her room; she felt well after the operation. Temperature has never been higher than 38.2°. The chain and stitches were removed in twelve days. The wound is nearly healed and in a short time the woman will be able to leave her bed. Child is doing well in the foundling asylum.

This is the third operation during my stay here, all with the same good results.

Very truly yours, etc.,

J. M. Buchanan, M.D.

P.S.—I suppose you have heard of Prof. Billroth's successful removal of a part of the stomach for cancer. At this time, patient is doing well, but can take only milk and a little wine as nourishment.

J. M. B.

Charleston, S. C.,
March 30th, 1881.

E. S. Gaillard, M. D.:

My Dear Friend.—I thank your correspondent, Dr. J. W. Brudlove, for the very kind terms in which he refers to my paper on the "Diagnosis of Valvular Diseases of the Heart," (Am. Journ. of the Med., &c., Oct., 1880,) and also for the reference to the early paper by Dr. Alexander Harvey, in which is contained a formula somewhat similar to mine. I am only surprised that others had not perceived these relations and formulated them earlier in aid of the student.

I am enabled to make a contribution of a like character with that of your correspondent: my friend, Dr. E. P. Rose, of Tunnison, Colorado, having called my attention to a passage in Ellis on "Diseases of Children," "Woods Library," 1879, p. 129. It is as follows: "If the endocardium be attacked, murmurs will be audible, and these will indicate diverse conditions according to their site." The following table will sufficiently indicate the differences between the more common forms of valvular disease:

BASE OR AORTIC MURMURS.

If Systolic=Constrictive disease. Pulse regular, jerking, visible.

If Diastolic=Regurgitant disease. Pulse regular, jerking, visible.

APEX OR MITRAL.

If Systolic=Regurgitant. Pulse irregular, soft, intermittent, with peculiar thrill.

If Diastolic=Constrictive. Pulse irregular, soft, intermittent, with peculiar thrill.

Had space permitted, I could have enriched my paper with many additional rules, as it is, I have received requests for copies from every portion of the country. With best wishes for the success of your Journal, I am Yours Truly,

F. Peyre Porcher, M. D.

South Carrollton, Ky.,
March 23d, 1881.

Dr. E. S. Gaillard:

Dear Sir: I wish to contribute to the profession the benefit of my experience in the use of olive oil, or sweet oil as it is called (and it is said a large proportion of it is cotton seed oil,) in biliary calculus as suggested by Dr. Roderick Kennedy in his communication to the February number of your Journal. It so happeend that at the time that I reccived that number of the Journal, I had a patient under treatment for that trouble, he having had several attacks of bilious colic therefrom, succeeded by tenderness in the epigastric and right hypochondriac regions. Upon reading Dr. Kennedy's communication, I advised my patient to give the sweet oil a trial, describing to him biliary calculi and the effect that the oil was expected to produce upon them; also requesting him that he should watch for them in his dejections. The action of the oil had the desired effect in softening and bringing about the discharge and expulsion of a large number of biliary calculi, from the size of a small hickory nut, down to a small pea, giving to the patient the much-wanted relief that all such patients feel. If the experience of all who may give the oil a trial in this terribly painful affection shall prove as satisfactory to patient as well as to physician as it has in this case, then the discovery of this therapeutical effect of the sweet oil will prove to be one of the greatest boons added to the store of knowledge for the relief of suffering humanity.

My patient brought me a number of the gall stones wrapped up in a piece of paper; they were quite soft and so thoroughly saturated with the oil that the paper was well greased by them.

S. J. RHOADS, M.D.

BROWNVILLE, SALINE CO., MO.,
February 9th, 1881.

DR. A. FLINT.

Dear Sir: Recently I have cured two cases of croup—by croup I mean exudative laryngitis. The following treatment was adopted in both cases. Kerosene or coal oil was given freely in doses of a teaspoonful for four days and nights. At first it was given every hour, afterward every two, three, four and five hours. There certainly is no danger in its free administration. At the same time, fluid ext. jaborandi was given in doses ranging from ten to twenty drops, and repeated just often enough to maintain free respiration. The atmosphere was kept warm and moist as advised by Dr. Sayre. I believe the coal oil will limit the exudation, and that the jaborandi will produce and maintain a moist and soft condition of the exudation and mucous membrane of the larynx and trachea. Some of the exudation was expectorated a number of times, the presence of it in the expectorated mucus proved conclusively the true character of the desease. I never saw such cases cured before. A very slight mucous rattle was the first favorable symptom in both cases, and as the rattle increased the wheezing, ah that terrible wheezing, disappeared, and on the fifth day the exudation began to give way. Both the medicines were given six days and nights. I do not think there was any further exudation after six hours' treatment. In both cases the disease was, I believe, of two or three days' standing before treatment commenced. I do hope that these medicines may prove curative in this grave disease. They are certainly worthy of a fair trial.

Very respectfully,
D. J. PARSONS.

NOTE.—Dr. Flint has kindly placed this letter before the readers of this Journal.—ED.

SEVERANCE, KAN.
March 9, 1881.

DR. E. S. GAILLARD:

Dear Sir.—On November 4th, 1880, I was called to see Ollie S., a little girl nine years of age. On arriving at the house, I was met at the door by her father, who informed me that the child had "flooded nearly to death."

Found the child with a quick and excited pulse, and hot, dry skin, blood was flowing quite freely from the vaginal orifice. The fever lasted only a short time, when the skin became moist and the pulse depressed. Her mother stated that she had seemed to be in her usual health except that during the day she had been troubled with hæmorrhage from the nose. She was subject to frequent nasal hæmorrhage which had always yielded to the application of cold water. In order to control the vaginal hæmorrhage, I made application of cold over the vulva and pubes, but without effect. Gave gallic acid with fl. ex. ergot, and introduced nozzle of a Davidson syringe part way into the vagina, and injected a considerable quantity of water. Continued the administration of gallic acid and ergot at short intervals, but derived no benefit from treatment, until the nozzle of the syringe was introduced into the full length of vagina, and a larger quantity of cold water injected, which finally controlled the hæmorrhage. There is a slight tendency to plethora in the family, and the patient's father, an aunt on the father's side, and a sister, are subject to violent attacks of nasal hæmorrhage. My litttle patient is extremely fond of violent sports and exercise out of doors, which will probably account for the frequent attacks of nasal hæmorrhage as well as the hæmorrhage from the uterus or upper part of the vagina, which I believe to be due to the same cause, viz.: the rupture of the weak and easily ruptured blood vessels of the part. As a preventive measure, the patient was directed to avoid such violent exercise as jumping rope, &c., since which time she has been free from hæmorrhage of any kind. Respectfully Yours,

S. H. Blakely.

Patterson, Texas,
February 2d, 1881.

Dr. E. S. Gaillard.

Dear Doctor: A belief that a brief description of a case which fell under my observation recently, will interest some of the readers of your Journal, must be my apology for asking space in its columns. I was called Dec. 30th, 1880, about 7 A. M., by Mr. E——, a German, age 31 years, who requested me to visit his wife, who he informed me had been confined during the previous night, that the child had been delivered, but that the placenta had not. Such I found to be the case upon my arrival at his house. I took away the placenta, gave fld. ext. ergot, and obtained the following history. She is 19 years of age, had been married two years and six months, that this was her first accouchement, and that she had gone to the full term of "utero-gestation," that she had enjoyed fair health during her entire pregnancy, that the movements of the fœtus had been strong, and she knew of no deformity in her family, or that of her husband, and that she had felt the movements the day before.

The child presented the following points of interest as bearing upon the subject of deformities. It (and I use the pronoun it in its literal sense) had but one leg which tapered gradually and regularly from the hips down to about the proper length, terminating in one foot, with two great toes, one on each of the out sides, with four smaller toes intervening. This leg was bent forward at such an angle as to bring the toes within three inches of the chin, but was very flexible and could be easily straightened out. The mouth and anterior parts presented but one aperture. The chest and superior extremities were natural, the ears were one inch higher than the normal position, and the integuments surrounding the posterior fontanelle entirely wanting, for a space of two inches each way. But the most remarkable points of deformity, and which authorizes me to use the pronoun it, was, *the total absence of any evidence of sex*, and the want of an anus. This was no case of imperforate anus. Nor was there any septum, depression or anything to convey to my mind occlusion of the vagina. The pelvis integuments, both anterior and posterior, were firm. Mrs. E—— was evidently mistaken about the movements of the fœtus the day previous to her confinement, as it was denuded of cuticle in spots, and presented other unmistakable evidences of approaching putrefaction. No persuasion upon my part could prevail upon the parents to give me this monstrosity, and hence my description must abruptly terminate. In the limited search I have made, for I have had access to but a small library, I have found no case recorded identical with the one above described. I neglected to say that the good wife lays the blame upon an unfortunate son of Æsculapius, who in an evil hour thoughtlessly laid within her reach some *doctor's books*, and upon their time-stained pages she saw pictures of such a character as to bring about the results her confinement developed.

Very respectfully,

H. P. Downman

MEDICAL CONFESSIONAL.

Peccavi.

Errors in Diagnosis. By J. McF. Gaston, M.D.

Campinas, St. Paulo, Brazil.
March 5th, 1881.

Some points of interest in two surgical cases that have come under my observation may be appropriately inserted under your caption of "Medical Confessional."

Both of these cases presented common factors, in the nature of the wounds, the obscurity of the diagnosis in the early stage, the resort ultimately to ligation of arteries, and the subsequent death from delay in resorting to this measure.

The first case was in the person of an active man about thirty years of age, serving as overseer on a coffee plantation, who was attacked by the Negroes. Among other injuries inflicted, there was a penetrating incised wound, beneath the middle of the dorsal spine of the scapula, in the left side of the body, and passing in the direction of the axilla on the same side.

The hæmorrhage on the occasion was not great, and a colleague with some claims as an operator, closed the external incision with a single interrupted suture and strips of adhesive plaster. For some days there was no flow of blood from this opening, but after the lapse of a week there was a daily oozing which increased to a notable discharge of blood occasionally. In the mean time there was pain and swelling about the axilla, extending also down the arm, which was treated locally as lymphatitis. The injury occurred on June 26th, 1879, and besides the surgeon who saw him then, another saw him subsequently, and gave me the history of the case as stated, with the further fact, that strips of cotton cloth saturated with the perchloride of iron passed into the external opening had sufficed to arrest the discharge of blood whenever it occurred.

I saw the patient for the first time on the 17th of July, 1879, at a house about eight miles from this city. He was emaciated and suffering from irritative fever, but still had appetite, and ate sufficiently to compensate in part for the loss of blood that occurred uniformly at one or another period of the twenty-four hours. The pain and swelling in the shoulder and arm had not diminished, and there was a well developed protuberance in the axillary region, of a nature that was not satisfactorily determined on that occasion. With a view to relieve the acute pain, a subcutaneous injection of morphine was made near the anterior doubling of the axilla, and the internal use of chloral was ordered at night, so as to procure sleep. As the fever came by paroxysms, though not at fixed periods, sulphate of quinine was prescribed in full doses, and afterwards decoction of Peruvian bark and chlorate of potash was ordered to be taken continuously. The local dressing for the limb consisted of mercurial ointment with the addition of iodine, mixed with camphorated belladonna ointment in equal parts, applied to the entire surface, and on this a poultice of flaxseed with hops, charcoal and Peruvian bark. An elastic bougie was introduced for six inches into the wound, reaching to the vicinity of the pectinæus part of the axilla, and though pushed forward with some force it did not cause any increase of the flow of blood, which at that time was a mere oozing, that ceased entirely upon the introduction of the strip of cloth with the styptic of perchloride of iron.

The condition of the patient exacting more attention than could be given at such a long distance, he was removed on the 19th into the city; and besides continuing a supporting treatment with wine and nutritious diet, a bandage was applied from the hand up to the shoulder, with a hope to relieve what still presented the indications of lymphatitis.

On the 23d of July the patient was seen by the surgeon who had first dressed the wound, and our consultation resulted in making an exploratory incision in the most prominent part of the axillary tumor, that had become soft and gave evidence of some fluctuation, but no signs of pulsation. It should be stated that the pulse in this left arm had been feeble from the outset, and was now scarcely to be counted at the wrist, which was attributable to the pressure upon the artery by the tumor in the axilla. Upon dividing the thinned cutaneous investment, there was a slight discharge of decomposed grumous blood, and in passing the finger through the incision, it encountered a mass of softening coagula, which was removed by piecemeal until the tumor had nearly disappeared, when suddenly a fresh hæmorrhage of arterial blood gushed out, and was only checked by pressure upon the subclavian artery where it passes over the rib. An application of cloth with perchloride of iron within the cavity from which the clots had been removed, and a compress placed in the axilla, seemed to prevent any return of the hæmorrhage, after pressure was taken off the subclavian artery. The character of the case was now for the first time made clear; and though the points given may seem to have been quite sufficient for a correct diagnosis, there were some contradicting features, that prevented my colleagues and myself from an early decision, that the axillary tumor resulted from the extravasation of blood into the cellular tissue, from a wounded artery that had not healed. Much valuable time had been lost, and the opportunity that was afforded at the outset for a successful operation, was reduced now to a very doubtful alternative by the changed condition of the patient and the evidences of septic fever.

After nearly a month without repair of the injury to the vessel, there was no ground to hope for its healing in the prostrate condition of the patient; and the only remedy available, was the ligation of the subclavian artery, as it was impracticable to determine whether the main trunk of the axillary or the posterior recurrent was the seat of the injury.

On the 25th of July I proceeded to operate, with the presence and assistance of the following colleagues of this city, viz.: Dr. Virgilio de Araujo, Dr. Pereira Lima, Dr. Joao da Costa Aguiar, and my own son, Dr. T. Brumby Gaston.

I adopted the French method below the clavicle, as in the extreme prostration, the practicability of locating the artery, while the vessel could be compressed above if requisite, presented to my view some advantages. After the subclavian artery was ligated, no trace of further discharge of blood could be seen, thus proving that either the trunk or some branch below that point had been wounded.

All the remaining coagula were turned from the axillary space, and a stream of carbolized warm water was passed by a tube from the original wound through the opening in the axilla. The dressing consisted of lint with carbolized oil, and as morphine was used subcutaneously instead of a resort to chloroform, he passed a comparatively comfortable night. The arm being enveloped in cotton batting did not lose its natural temperature, and yet on the following morning the indications of general sinking were evident and on the next night he died.

The other case to which I have referred, was in the person of a boy fourteen years old, who fell with a narrow-bladed knife in his hand, so that it was thrust into the thigh at the junction of the lower with the middle third anteriorly. It was supposed from the statement of the youth, that it penetrated some four inches into the tissues, but in what direction could not be ascertained with any exactness, as he was not seen at once by any medical man, and the flow of blood being arrested by a simple bandage, the external opening closed in a few days. Deep-seated pain and the subsequent swelling of the member caused him to be put under the care of a very intelligent, but not eminently practical physician, whose opinion of the case can only be inferred from the fact that no proper measure was adopted to arrest the evil that was gradually undermining the strength of the patient. Though under his observation for nearly a month, as was reported to me, no exploration of the part had been made; and yet the indications at this early period when his attention was called to the swelling or distention of the thigh, with the previous history of the case, should have suggested the use of the exploring needle, or other means of ascertaining what was the cause of trouble.

The family being convinced of the fatal tendency of the case, determined upon a change in the surgical supervision, and I was called to take charge of the boy on the 17th of January, 1881. As there is very little ceremony in this country on the transfer of a patient, I had no opportunity of knowing anything from the previous attendant as to his diagnosis or prognosis, but finding a very grave state of things as to local trouble and the constitutional condition, I requested another physician of good standing to see him immediately with me, so as to shield me from the consequences of the neglect on the part of the first attendant. We found the patient extremely prostrate, with perhaps septicæmia, as the adynamic fever and the œdematous condition of the entire lower extremity, even involving the inguinal region, with marked distention of the middle portion of the thigh, giving a sense of deep-seated fluctuation, indicated that decomposition had commenced. A convulsive paroxysm had presented itself several times during the previous night, and in the morning of the same day, followed by temporary unconsciousness, which according to the description given could not be of a tetanic character, and hence was attributed by us to septic intoxication.

On the next day still another colleague saw the case with me, and upon the introduction of an exploring needle in the most prominent portion of the distention on the anterior aspect of the thigh, a small quantity of dark grumous blood appeared, and the same fluid continued to exude slowly after the trocar was removed. I was satisfied from this that the collection was not purulent but decomposed blood, resulting from the breaking down of coagula that were formed from the blood on the occasion of the original injury, and by the consequent additions from the escape of blood into the cellular tissues owing to the lesion of the femoral artery, or some branch of the same.

The general treatment at the outset consisted in the internal use of carbonate of ammonia, ether, and camphor, followed by decoction of Peruvian bark and chlorate of potash. The external applications were camphorated mercurial ointment and a pomade of belladonna in equal parts and the whole enveloped with a poultice of flax seed and hops.

A third colleague, in whose surgical opinion I relied more than upon the judgment of the whose had already visited the patient, examined the case with me on the fourth day after I had taken charge of it, and all the symptoms continuing in aggravated form, we determined to resort to the aspirator with a view to remove any fluid that could pass in the larger sized trocars. This was done on the following day in conjunction with the medical men who had assisted me in making the first exploration.

The discharge was of the same character as that formerly noted, but small in quantity, indicating that the mass was not dissolved sufficiently to flow out through the tubes used with suction.

This was done to verify, if possible, the true nature of the case without the necessity of a recourse to laying open the tissues, under the untoward circumstances of extensive extravasation and extreme general depression of the vital forces. But being convinced that nothing short of complete removal of the disorganized mass could avail anything, every means were employed for favoring the nutrition of the patient, so as to prepare him to undergo the operation.

What was gained in one direction was lost in another, as decomposition evidently was going on and doing its fatal work both locally and generally.

On the 27th of the month I invited all of the medical men who had visited the case with me to a general consultation with a view to a final decision as to the course to be pursued, and as death stared us in the face our measures were to be taken as a decisive resort.

After being satisfied by exploration in various points that there was no collection of fresh blood in the proximity of the central portion of the mass of grumous blood, a free incision was made, measuring four inches in length in the tissues of the anterior upper third of the thigh on its inner aspect. The softened mass of coagulated blood came into view throughout the entire extent of the incision, and my colleagues insisted in awaiting developments without the removal of the accumulation, so that I simply passed a tube into the cavity, by which a solution of carbolic acid with tincture of iodine was forced with a syringe into different parts. A flax seed and carbolized oil poultice was laid over the incision, and the nurse was instructed to keep a close watch upon the drippings, so that should there be any signs of foul blood I might be promptly notified of the fact. He was also instructed how to compress the artery in its passage over the bone in the inguinal region, in the case there should be hæmorrhage. The boy recovered well from the temporary use of the chloroform on the occasion of the incision, and seemed to be inspired with the hope of relief, but this was of short duration. I had not been absent from the house five minutes when a messenger followed me to a house where another patient had stopped me in company with one of my colleagues, and informed us that our presence was desired immediately.

Upon returning, we found that active hæmorrhage had ensued, and that our nurse had succeeded in arresting it by the timely pressure with his thumb, as I had previously advised in case of such an accident.

I determined at once upon the ligation of the femoral, and my friend acquiescing in this course, we summoned the other two medical men who had been with us in the consultation of the morning, which lead to the incision. The clots being all removed while the artery was securely compressed, an incision at right angles to the one previously made, exposed the tract of the femoral, which was ligated without any difficulty, and the immediate danger was ended The gentlemen who kindly aided with their counsel and efficient co-operation in the responsible task that was devolved upon me by the failure of another colleague to meet the requirements of the case by ligation at an early period, concurred with me in the course pursued from the time the patient came into my hands; and I take pleasure in stating that they were the most competent advisers that our city affords, viz., Dr. Germano Melchert, Dr. Pereira Lima and Dr. Silveira Lopes.

The cavity left after removing the clots was extensive, and the three surrounding flaps were thinned by the compression from within upon the tissues, there being indications of a loss of vitality in the muscular substance, so that gangrene had nearly begun in some patches. This opening being filled up with carbolised lint and a layer of the same placed on the outside of the incisions, a rubber bandage was loosely applied from the foot up to the body to support the weakened and œdematous tissues of the entire limb, and the whole was rolled in cotton batting.

The patient passed the afternoon without anything occurring to increase our grave apprehensions of the result, and took some nourishment with port wine. But on visiting him next morning there was intolerance of food or drink, and the courageous boy gave evident signs of sinking, so that only champagne with ice was prescribed for temporary relief and gratification.

He expired at 12 o'clock in the day, being about twenty-four hours after the close of the operation for ligation of the artery. This was two weeks after I had taken the case under my care, and six weeks from the date of the injury, soon after which Dr. Candido Barata had been placed in charge of it, and failed so evidently to do what was indicated, that the most charitable solution that can be given of his neglect is an error in diagnosis.

I trust that this notice of my unfortunate results may serve to avert similar calamities in the hands of others, and they will certainly induce me to loose no time in seeking the true source of trouble in such cases as may occur for the future in my hands. The branch that is cut on the main trunk of the artery should be ligated with as little delay as possible, and the clotted blood all removed from the interstices of the cellular tissue into which it has been extravasated. These cases go to combat the history of similar accidents in which a gradual discharge is kept up from an injured artery, so that there is but little prospect of the healing of the vessel by the lapse of time, and hence the sooner an operation is performed the better will be the result for the patient, as likewise for the reputation of the surgeon in charge.

NOTE.—Have the American readers of this JOURNAL no errors to report ; or have they all been so correct in diagnosis, and so thorough in treatment, as to have no regrets as to the past, and no faults to confess in the present? Or are they afraid to have the truth known?—E. S. G.

PETERSBURG, Va.,
30 Union street,
March 31st, 1881.

MY DEAR DOCTOR GAILLARD:

As I have not yet seen in this Journal any correspondence from Virginia, (!!) the home I believe of an enterprise which has now assumed such expanded proportions, I have concluded to send you the brief recital of a case of eczema, cured by an accidental prescription.

It was one of those persistent and perverse cases of eczema infantilis, which occasionally falls to the lot of the practitioner, perhaps for the purpose of testing his patience and taking down his conceit. It had been under observation for about one year, half the life time of the child, and afforded the most beautiful clinical illustration of eczema in all of its forms, stages and varieties, from the freshly dripping, or rather in this instance raining vesicle, through the pus secreting impetiginous sore, to the dried, crusty cap, sometimes covering the whole head, shadeing off in numberless places, on the back or limbs, into thickened and fissured patches, involving the true skin; all at the same time, "everything at once and nothing long," and accompanied with an itching and burning which seemed at times almost to craze the little patient. He was a healthy, bright, well-developed little blonde of good inheritance, one of quite a family of children, none of whom had ever had any cutaneous disease. I had treated him for nearly twelve months, had run through all of the local and constitutional remedies, that I had ever seen, used, or heard of being used; when finally, one morning, my little patient was brought in decidedly worse than even he had ever been before. I hurriedly directed two prescriptions, not so much in hopes that they would do any good, as I was that the father of the boy would seek a more skillful physician.

I did not see or hear from the little fellow for two weeks when his father came in, on this occasion, without the patient, and informed me, his face all over with smiles, that the little boy was *nearly well*, and that he thought a repetition of the last prescription would entirely cure him. I could not even recall what this was, but I begged him to get it renewed without any delay, and to use it thoroughly and persistently. "But," he replied; "I cannot get it renewed. The druggist says that he put up the prescription *wrong* and that I have been using it *wrong* all the time, and that he can't put it up any more till he sees you." "Has it not relieved your child," I asked. "Yes," he replied, "more than anything else that ever was done for him." I then gave him a note to the druggist to put up the same prescription which he had put up, right or wrong, and directed its use as before. In a few days the little patient was well and his skin as smooth and as soft as velvet.

The prescriptions which I ordered were the following. First—Ol. of cade, four drachms; sapo viridis, four drachms; alcohol, one ounce. To be applied once a day. Secondly—Unguent oxid. zinc, two ounces; ol. of cade, two drachms; to be kept on the eruption regardless of the stage or character of it, all the time. The mistake which the compounder of the prescription made, was to substitute the oil of *cajeput* for the *oil of cade.* I have seen the oil of cajeput recommended for parasitic eruptive diseases, but had never known it used before in eczema. I have repeatedly used it since with the happiest results. Dr. Buckley in a late brochure upon the subject of eczema while endorsing highly the invaluable zinc ointment in the treatment of that disease, condoles with the doctor who has only that resource. I beg to add this accidental contribution, and by so much to enlarge such resource. Wishing you, doctor, in your new and extended field of labor the success to which your worth and energy entitle you.

I am yours very truly,
JNO. HERBERT CLAIBORNE.

NOTE.—This interesting, instructive and amusing letter properly belongs to the original correspondence department, but the editor cannot resist the inclination to put it in the "confessional." How many physicians have had a like experience in regard to therapeutical difficulties, and tentative prescriptions; but how few have had the courage to come forward and tell the truth about them? Who will follow this good example?—ED.

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REVIEWS.

"Judex damnatur cum nocens absolvitur."

The Principles and Methods of Therapeutics. By ADOLPHE GUBLER, M.D., Paris. Translated from the French. Philadelphia. D. G. Brinton. 1881.

The preferred and favorite pupil of Trousseau must have been a man of distinguished powers and unquestioned merit; but if there has ever been a doubt upon that subject, the appearance of this great work has absolutely dissolved it. One of its incidental charms is the biography of its distinguished author. Like that of Faraday and Simpson, of Trousseau and of Velpeau, of Warren Stone and of so many of the great in all countries, it tells the same old, sweet story of the obscure and unaided boy of talent and courage working his way bravely and conscientiously from the lowest walks of life to the highest rungs in the ladder of distinction.

In chemistry, botany, pharmacy, therapeutics, natural history, anatomy, pathology, and clinical medicine, this boy became as a man not only a great leader, but an acknowledged authority. A very few of his triumphs may be appropriately given in recommending his especial volume to merited and widespread disssemination. It is he who demonstrated conclusively the alkalinity of the urine of convalescence; the transitory glycosuria in the reäction of cholera; the passage of biliary resins in hepatic jaundice; the chemical properties and clinical significance of indican in urine; the difference in the urine of malignant and inflammatory fevers; the hepatic lesions in syphilis of the newly born; the pathogenetic and clinical distinction between hepatic and hæmic icterus; the etiology of crossed hemiplegia; the differences in herpetic and diphtheritic sore throat, etc.. etc. He brought into common use in France and elsewhere, chloral, eucalyptus, calabar bean, aconitia, bromide of potassium, bromohydrate of quinia, and jaborandi. He filled the highest positions of honor, distinction, science and trust. He, more than anyone, successfully refuted the spurious fallacies of Darwin and Lamarck on indefinite transformation (evolution), and demonstrated the relative fixity of the various species of animal life.

Among many of the most striking passages contributed by him to scientific literature, none are more worthy of note and dissemination than the following:

"For those who cultivate the science of man, there are two principal methods of seeking the truth. While some, taking side-paths leading to rapid results, seek, through experimentation on animals, to establish the fundamental laws of vital organization, in order to make application of them to the human species, others interrogate man himself to obtain the information *he alone is capable of giving*, and attempt, by patient and laborious observation to distinguish among the phenomena common to man, with all living beings, those peculiarities of organization and function proper to him alone. The first are experimentalists; the latter are physicians."

Gubler was essentially independent; among many illustrations of this fact he taught that sleep was dependent upon a static hyperæmia of the brain; and while this is unquestionably a fallacy, the fact shows how entirely independent was the man.

As to the medical and therapeutic features of this work, it is only just to say that they are strong, original and highly valuable. Every reader should order it. The Publisher has issued it handsomely.

Lectures upon Diseases of the Rectum and the Surgery of the Lower Bowel. By W. H. Van Buren, M.D., LL.D. New York. D. Appleton & Co. 1881.

As the first edition of this valuable work was carefully reviewed in this Journal, and as the work is familiar to all, it is only necessary to call attention to the issue of the second edition, and to advise all who would possess these most charming and instructive lectures to obtain them before it is to late. The demand for the volume is such that like its predecessor it will soon be "out of print." Comment as to the value and scope of the work is unnecessary. It is an admitted authority and its practical character is universally attested.

The Principles and Practice of Surgery. Being a Treatise on Surgical Diseases and Injuries. By D. Hayes Agnew, M.D., LL.D. Vol. II. J. B. Lippincott & Co. 1881.

The first volume of this really magnificent work was carefully noted and described, and while the appearance of the second has been unusually delayed, it is a pleasure to say the volume is as fully entitled, as was its predecessor, to the encomiums passed upon it, and that it is one of the most valuable additions of the present decade to the literature of Surgery. The text is lucid, concise, and comprehensive. It is profusely illustrated with excellent engravings and wood-cuts of pathological conditions, anatomical and surgical regions, and of the most approved instruments and mechanical designs. The work as a whole is an honor to American Surgical literature. It is well issued. The author has been noticeably careful in giving credit to all of his assistants. The Publishers have done their work exceedingly well.

An Elementary Treatise on Practical Chemistry and Qualitative Inorganic Analysis. By Frank Clowes, D.S.C., London. Phila. H. C. Lea's Son & Co. 1881.

This work is not only well adapted for use as a text book in medical colleges but is also one of the best that a practitioner can have for convenient reference and instruction in his library. As a rule such volumes are too technical and abstruse for study without some didactic aid, but the volume presented is easy of comprehension and will be of great value to college students and busy practitioners.

John Hunter and His Pupils. By S. D. Gross, M.D., LL.D., etc. Presley Blakiston. Philadelphia, 1881.

The Philadelphia Academy of Surgery requested very appropriately that the distinguished author of this life of Hunter should deliver its first annual address and this work is the result of his cheerful and efficient compliance with their desire. As very much of the information most interesting and instructive in regard to Hunter has been published in works not accessible to the American reader, the author of this volume has embodied in it most of the facts not familiar to his medical countrymen. In doing so he has drawn liberally and welcomely upon the Memoirs of Hunter by Sir Everard Home (his brother-in law), Dr. Joseph Adams, Mr. D. Henry Ottley, and from the annual orations delivered, since 1824, in commemoration of the distinguished Anatomist and Surgeon, by Fellows of the Royal College of Surgeons. This little volume also furnishes sketches of the lives of the most distinguished pupils of Hunter and of his most eminent contemporaries.

The whole work is admirably done, and the material mentioned is given in the author's best style. There is furnished an excellent copy of Sharp's steel engraving of Sir Joshua Reynold's painting of Hunter, of which Lavater remarked, "this is a portrait of a man who thinks."

The readers of this Journal will certainly be glad to invest $1.50 for this delightful and attractive volume.

Syphilis and Marriage. Lectures Delivered at the St. Louis Hospital, Paris. By Alfred Fournier. Translated by P. Albert Morrow, M. D. New York: D. Appleton & Co. 1881.

There is no question which, in its pathological and social aspects, is of greater importance to the family physician, than that which gives a title to this valuable volume. There is none which is more perplexing to the learned and conscientious practitioner. The facts hitherto before the Public are so fragmentary, disseminated and unsatisfactory, that there are few physicians who could readily turn to them for necessary information. In this volume, this great social question is analysed and presented with great power and fidelity. The fact that the author is a clinical teacher at the Lourcine, the St. Louis and other special hospitals in Paris, and that he occupies a special chair created for him in the "Faculty of Medicine of Paris," are guarantees of his especial fitness for the preparation of such a volume. All who practice, need all of the information therein given, and it is believed that the work will have, as it deserves, a large and prompt sale. The price is only $2.00.

A Treatise on the Materia Medica and Therapeutics of the Skin. By Henry G. Piffard, A.M., M.D. New York: Wm. Wood & Co. 1881.

This is one of the most practical, lucid and judicious volumes on this subject now before the Profession. It is the embodiment, in concise and excellent diction, of the extensive and valuable experience of an accomplished and skilled observer.

The volume is acceptably divided into two parts; that on materia medica, in which the drugs used in dermatological practice are described with accuracy and care; and that on therapeutics, in which directions are given for the prescribing and administration of these drugs. There is also given in this latter section a valuable bibliography, formulary and index. As a valuable and practical treatise this work is entitled to general confidence and deserved commendation.

Wood's Library of Standard Medical Authors for 1881.

There is no better investment which a physician can make of fifteen dollars, than by sending them to the enterprising publishers of this series. It is a marvel that so much can be given for so little received, and in this series (for 1881) the quality of the matter is fully as good as the quantity for the small price demanded. The volumes so far issued are of themselves guarantees of the character of those to be issued. The enterprise is heartily commended. The following is the list of the volumes composing the series for 1881:

I. *On Albuminuria.* By W. H. Dickinson, M.D.
II. *Materia Medica and Therapeutics of the Skin.* By Henry G. Piffard, A.M., M.D.
III. *A Treatise on Diseases of the Joints.* By Richard Barwell, F.R.C.S.
IV. *A Treatise on the Continued Fevers.* By James C. Wilson, M.D. With an Introduction by J. M. DaCosta, M.D.
V. *Rheumatism, Gout, and some of the*

Allied Diseases. By Morris Longstreth, M.D.

VI. *A Medical Formulary.* By Laurence Johnson, A.M., M.D.

VII. *Diseases of the Œsophagus, Nasal Cavities, and Neck.* By Morrell McKenzie, M.D., London.

VIII. *Artificial Anæsthesia and Anæsthetics,* By Henry M. Lyman, A.M., M.D.

IX. *General Medical Chemistry.* A Practical Manual for the use of Physicians. By R. A. Witthaus, A.M., M.D.

X. *The Diseases of Old Age.* By J. M. Charcot, M.D. Translated by L. Harrison Hunt, M.D. With numerous additions by A. L. Loomis, M.D., etc.

XI. *Diseases of the Eye.* By Henry D. Noyes, M.D.

XII. *On Diseases of the Reproductive and Urinary Organs.* By Robert F. Weir, M.D.

BOOKS AND PAMPHLETS RECEIVED.

Ercolani; On the Utricular Glands. By Henry O. Marcy, A.M., M.D. Boston: Houghton, Osgood & Co. 1880.

Atlas and Plates accompanying Ercolani on the Utricular Glands, etc.

Hemiopia. By Wm. Dickinson, M.D., St. Louis, Mo.

Winter Health Resorts. Climate of Atlantic City. By Boardman Reed, M.D., Atlantic City, N. J. 1880.

Annual Announcement of the Medical College of the Pacific. San Francisco, Cal. 1881.

A Conspectus of Three Different Forms of Cardiac Trophic Disease. By Roswell Park, A.M., M.D. Richmond, Va. 1881.

The Cardiac Nerves. Tabulated by Roswell Park, A.M., M.D.

Transactions of the American Ophthalmological Society. Newport, 1880.

Photographic Illustrations of Cutaneous Syphilis. By Geo. Henry Fox, A.M., M.D. Complete in twelve numbers. Nos. 1, 2, 3. E. B. Treat, Publisher. New York, 1880.

How to Use the Forceps. By Henry G. Landis, A.M., M.D. E. B. Treat, 1880.

Clinical Lectures on the Physiological Pathology and Treatment of Syphilis. By Fessenden N. Otis, M.D. New York. G. P. Putnam's Sons. 1881. $1.75.

Cold Pack and Massage in the Treatment of Anæmia. By Mary Putnam Jacobi, M.D., and Victoria A. White, M.D. New York. G. P. Putnam's Sons. 1880. $1.50.

Lectures Upon Diseases of the Rectum. By W. H. Van Buren, M.D., LL.D. D. Appleton & Co. New York. 1881.

Principles of Thereapeutics. By Adolph Gubler, M.D. Paris. Translated from the French. D. G. Brinton. Philadelphia. 1881.

Agnew's Surgery. By D. Hayes Agnew. Volume II. J. B. Lippincott & Co. Philadelphia. 1881.

On Quebracho Bark. (Aspidosperma Querbracho). By Dr. Adolph Hansen Translated from the German.

Laparotomy and Colotomy with Formation of Artificial Anus for Obstruction of Intestines. By Wm. A. Byrd, M.D., of Quincy, Ills. 1880.

A Conspectus of Three Different Forms of Cardiac Trophic Disease. By Roswell Park, A.M., M.D. Richmond, Va. 1881.

Extirpation of Rectum. By Wm. A. Byrd. Quincy, Ills. 1881.

Bright's Disease of the Kidney Relieved by Buffalo Lithia Water. Buffalo Lithia Springs, Va.

The Personal Factor in the Etiology of Preventable Disease. By Alfred Ludlow Carroll, M.D. 1880.

Announcement of the Medico Chirurgical College of Philadelphia. Session 1881-2.

A Statistical Report of Two Hundred and Fifty-two Cases of Inebriety Treated at the Inebriates Home, Fort Hamilton, L. I. By L. D. Mason, M.D.

Sympathetic Inflammation following

Operations for Cataract. By David Webster, M.D. New York. 1880.

Annual Review of the Drug Trade of New York, for the year 1880. D. C. Robbins, Esq.

An Improved Self Retaining Rectal and Vaginal Speculum. By A. T. Erich, M.D Cincinnati, O. 1881.

Anomalies of Perspiration. By J. H. Pooley, M.D. Columbus, O. 1880.

Contributions to Ophthalmology. By C. R. Agnew. New York. 1880.

Failure of Vaccination. Variolous Infection an Illusion. Vaccination an Injury to Health and a Danger to Life, and as a Protection against Small-pox a Vanity. By Carl Spinzig. St. Louis. Mo. 1881.

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TRANSLATIONS.

"Ubi mel ibi apes."

Jaborandi and its Alkaloid Pilocarpine. By Dr. VULPIAN. From *de Journal de Médicine et de Chirurgie,* February. 1881.

Introduced into France by Continho of Pernambuco, about seven years ago Jaborandi has been the subject of a great many researches. There are few diseases in which it has not been tried and despite the physiological properties which render it unique of its kind, there are no remedies likely to be called on to play so important a part in the the therapeutics of the future. The process of obtaining the alkaloid of Jaborandi pilocarpine is so well known as scarcely to require mention here. The effect of the remedy, whether the alkaloid or a preparation of the drug itself be used; the face soon reddens under its influence and sensation of tightness is felt in the head. Soon the cutaneous surface is slightly reddened through its entire extent and the saliva begins to accumulate in the mouth; the beginning of diaphoresis and salivation so well known to be produced by its use, and which are often accompanied by an increase of the lachrymal secretion, the secretion of the trachea and bronchi. Generally salivation is more frequent than diaphoresis and sometimes is alone present if the quality of the drug used be small, and it is well to know that children are often less affected by the drug than adults. The drug has also an action on the pupil whether it be given by the mouth or hypodermically, or applied directly to the eye dissolved in glycerine or water. The myosis obtained by this last procedure is constant and very pronounced, analoguous to that obtained from eserine. It is not this property alone that has caused its admission into the materia medica of the ophthalmologist. It has also an influence on the eye through secretory excitation. Experimentation on animals has shown that the biliary and pancreatic secretions are increased by it. It is certain that Jaborandi and its alkaloid are two of the most active cholagogues. The hepatic action might be found of service in certain cases of hepatic colic. The slight action on the pancreas might be turned to profit in certain cases of dyspepsia characterized by the difficulty or slowness of digestion of fatty or starchy matters or of both kinds of food.

On the gastric and intestinal secretions Jaborandi has no very sensible effects, nor does it affect the kidneys. The antagonism between it and Atropine is one of interest and has led experimentally to the result that Jaborandi temporarily increases the secretion of milk to a slight degree. The drug acts very strongly on the circulation; above all when given in large doses it relaxes the beating of the heart and slightly enfeebles it.

Pilocarpine may be given internally by the following formula:

℞ Pilocarpine Chlorhydrate, 3⅓ grs.
Sacchar Pulv., . . ʒ ss.
M. ft. Pulvis No. X.
S. One at a dose.

and a sub cutaneous injection may be made with the following:

℞ Pilocarpine Chlorhydrate, 3⅓ grs.
Aquæ distill, . . ʒ iiss.

of which three to five miniums may be injected.

The remedy given in either of these ways has been of value in bronchitis, tracheo-bronchitis and pleurisy a frigore. Several cases attacked by these affections have had marked relief by the use of the remedy, complicated occasionly by vomiting and malaise if the dose were a little too strong. In pleurisy its effects have been most marked, but it does not possess the power of aborting the disease attributed to it by some. The remedy has been tried in rheumatism, but as might be expected, with relatively little effect, although where indicated it has proved of value. The results in Bright's disease have been very contradictory. Gubler claims good results from it. Schmitz has claimed good effects from it in Alopecia and Armanigand claims that it is of great value in fœtid perspiration of the the feet. It is obvious therefore that there is much to be worked out regarding the use of this remedy.

Treatment of Laryngitis and Bronchitis in Children. By JULES SIMON.

Journal de Medicine et de Chirurgie.
February, 1881.

Treatment of laryngitis is often neglected in children, and wrongly so since it shows a tendency to spread beyond the limits of the respiratory system more often than in the adult. If the disease be at all severe, the child should be kept in bed, in spite of the opposition of the parents; the limbs should be wrapped in wadding. Hot drinks should be given, and the following prescription:

℞ Aquæ Aurant flos.
Aquæ Limon, . . āā ℥ ii.
Aquæ Lauro cerasi, ʒ ss.
Tinct. Aconit Rad.
Tinct. Bellad, . . āā ♏ v.
Syrup Tolu, . . ℥ i.
M.

To a child but two years old half of this should be given by teaspoonsful as may be indicated during twenty-four hours. If older, the whole should be given in that period by desert or tablespoonfuls. These different substances united together, act well. The orange flower water and the lemon water act better as calmatives in these young children than might be expected; the aconite and Belladonna diminishing the susceptibility of the respiratory passages. If the agitation be very pronounced, forty-five minims of syrup of codeine may be added, increased as the child is over three years. Laryngitis is often followed by bronchitis, but from the standpoint of therapeusis a well marked distinction should be made between the simple inflammatory bronchitis with a nervous element only, and the capillary bronchitis or broncho pneumonia. The treatment above indicated may in the first case remain unchanged. If there be a pronounced catarrhal element, the cherry laurel water should be replaced by a grain or two of Kermes mineral, or by eight grains of white oxide of antimony. As revulsives slight counter irritations may be used, but in graver cases vesicatories not to be left in place more than three hours, interposing between the vesicant and the skin a leaf of oiled silk paper. If the bronchitis has a too intense catarrhal secretion, nauseant expectorants may be used. The difference between the mode of treatment of simple bronchitis in the child and the treatment of capillary bronchitis cannot be too strongly insisted on. In the latter any remedy tending to diminish the vitality of the child, like opium, aconite, belladonna, Kermes mineral, antimony or nauseant expectorants should not be prescribed. Here alcohol in it various forms should be had recourse to. Children under one year, for example, may be given from two to four drachms of Malaga wine in a gum julep. Over one, from three drachms to two ounces of that wine also in a gum julep, If brandy is indicated, the child of less than a year should receive from half a drachm to to two drachms of this liquid, in a similar menstruum, which may be increased in children over that age up to an ounce. To this should be added, but not for more than two or three days, from five to ten drops of tincture digitalis. Along with the internal medication by alcohol; with the intention of lowering the temperature and sustaining the patient. Revulsives in great numbers should be applied. That is, slight vesication should be made on different parts of the chest, in such way that no more than two vesicants are at the same time in action, and the entire duration of each vesication is but three or four hours. A great revulsive action is thus obtained, but with less disagreeable accompaniments than usual. Alcohol and the revulsives accompanied by every accesory not necessary to mention here, is the basis of treatment in this affection.

Purgatives and their uses in Therapeutics By GERMAIN SEE. *Bulletin. Général de Thérapeutique.* February. 28th, 1881.

I propose the term *evacuants* for every substance tonic or not which favors the expulsion of all matters solid or liquid from the intestine. Among these substances peculiarily in a mechanical manner in producing a propulsion at the same time a division of the stercoraceous masses; these should therefore be called *deobstruents.*

Other substances like Belladonna favor the contraction of the intestinal muscles and are therefore termed nervo-motors. The true purgatives act neither mechanically nor in any way similar to the nervo-motors. I propose to describe these *true purgatives* after chemico-physiological action and therefore range them in four classes.

First. All the series of neutral salts with a base of soda potash or magnesia.

Second. Substances containing cathartic acid soluble in water like senna and rhubarb, the latter differing from the former in containing *rheic* acid and some tonic and a bitter substance.

Third. *a* The anhydrous glycosides comprising aloes coloquentida? *b* the anhydrous glycosides requiring the aid of the bile to be absorbed and act like Jalap, Scammony etc.

Fourth. The fatty bodies Castor oil Croton and olive oil, glycerine etc.

Five. The Mannas fruits sugars and above all sugar of milk. The purgative to which preference is to be given should be the one which best complies with the following requirements.

First. It should be capable of continuation with impunity or at least be often repeated without causing a consecutive constipation or general denutrition.

Second. It should evacuate not only the liquid but also the solid stercoraceous matters.

Third. It should produce these effects without causing inflammation of the intestinal mucous membrane. What evacuants come follow in order by these requirements. In the first order of importance and harmlessness are the *deobstuents* which act mechanically without being digested or absorbed, like the inert smooth seeds—flax seed for example—or others of the same kind and size, which may traverse the intestinal canal, without producing the least hypersecretion or the least irritation, and which determine by propulsion or by fragmentation of the stercoraceous mass the exit of the solid intestinal contents. Since the deobstruents do not exert a chemical or dynamical action, it is important to prescribe at first in sufficient quantity; a fear of causing an accumulation of inert grains should cause a purgative to be given from time to time. The *nervo–motors* have but a very uncertain action. Belladonna suppresses the inhibitory influences which the great splachnic nerve exerts on the intrinsic nerve centers of the intestinal mucous, it therefore does not produce a paralysis of the smooth fibres, but a more complete excitation not restrained by the intraparietal ganglia of the intestine. The value of this motor action is however unfortunately lessened by the dimunition of the secretion resulting from the action of belladonna or atropine on all glands (sudoriparous, intestinal, or gastric). Among the true purgatives the choice is chiefly between the salts and saline waters, and the drastics.

Glycerine and the oils are badly borne and finish by being of no effect. The purgative salts constitute the most useful means of evacuation. Among the salts of soda, the sulphate in drachm doses, produces nothing, even if the dose be repeated every four or five hours, but a drachm and a half two or three times at appropriate intervals will cause vomiting.

Physiological effects of the purgatives. The action of the purgatives have been interpreted in many ways, these the simple results of endosmosis ?

a. Liquids from endosmosis.—According to the law of endosmosis, the concentrated solutions of soda, potash or magnesia arrived in the intestine ought to draw to them the water from the simple saline solutions of the blood, from which exosmosis, would result a dilution of the intestinal contents. But as the salines purge, even when diluted with water, this theory is now abandoned. Purging is not done at the expense of the water of the blood, and an exclusively watery liquor is not discharged.

b. Normal Liquids.—The mechanism which controls the action of purgatives is the increase in rapidity and number of the peristaltic movements of the intestines; in the normal state the evacuations which are often in healthy animals not complete until three days after a meal of meat, indicating a great slowness in the peristaltic action of the colon and rectum, are replaced under the influence of purgatives, by complete evacuations at the end of some hours (Radijeski).

The experiments of Moreau on purgatives placed in the intestine which become filled with liquid at the end of twelve or twenty-four hours, seem to contradict the indications of Radijeski, but experience with all purgatives is not the same, and the quality of liquid was not settled. What is certain is that the intestinal contractions are increased and that apparently diarrhœal stools are but the normal *liquid* contents of the intestine has been demonstrated.

c. Normal Evacuated Liquids.—The nature of the evacuated liquids does not differ sensibly from the normal states. In the normal state these are acid, and contain cholesterine, cholatic acid fat, soaps, indol, peptoniform albumen, perhaps leucine, taurine, and mucus; the stools contain fifty-two parts per hundred of water; yield eleven and nine-tenths per cent of ashes, potash predominating therein. The diarrhœic stools contain eighty-five parts in a hundred of water, and an excess of soda; these are the only differences.

d. Other Intestinal Liquids, Bile, etc. Cholagogues.—The following are the evacuations produced by various purgatives:

Bile.—The researches of Rutherford and Vignal resulted in the the following conclusion. First—There are remedies which stimulate the liver and intestine, such as podophyllin, which increases the biliary secretion without diminishing its constituent elements; it is a true cholagogue. *Aloes* produces the same effect, but the aloetic bile is more liquid. Coloquintida Jalap and Sulphate of Soda causes a secretion of an aqueous bile.

Second.—Other remedies passing for cholagogues have no action on the biliary excretion; rhubarb, for example, is of no effect; croton oil acts feebly; castor oil not much more, and the famous calomel only facilitates the *excretion* of bile already in the gall bladder. (Sée)

e. Other Intestinal Products Eliminated by Purgatives.—*Calomel* eliminates in great part the products of pancreatic digestion leucine, tyrosine and pancreatic peptones caught therein. The *magnesia* salts do not touch the products, elaborated in the large testines, although the vegetable laxatives in determining elimination at the same time expulsion is accomplished, not mucine but mucous matter soluble in an excess of acetic.

Diverse Ferments.—The vegetable purgatives eliminate a sugar making intestinal ferment. Senna, however, a peptonising ferment.

Undigested Food.—*Croton* and castor oil often cause the expulsion of undigested food.

f. Liquids from Irritation. — The nature of the evacuated liquids do not always exactly correspond with the normal condition. According to Vulpian, a product of irritation is characterized by an epithelial desquamation, an abudant production of mucus and active secretion of intestinal juice. This liquid of irritation is obtained not only when the purgative is introduced into an enervated intestine, but also when the purgative is taken by the mouth, which seems to prove that hypersecretion is not of nervous origin necessarily; that the presence of blood in the intestine whether from direct or indirect local irritation, suffices to give rise to a liquid not presenting any absolute difference from the normal, the difference being purely in the proportion of different elements, a difference sufficiently explained by local irritation. This assertion applies to all drastic purgatives. Although the laxatives (Manna, etc.,) do not provoke any local irritation, it is not the same with the cathartics or the anhydrous glycosides; these latter determine a local hypersecretion.

Résumé.—From this glandular production all the diorrhœal liquids are constituted, the intestinal contents, being expelled by the rapid and exaggerated contraction of the intestines. Therefore the intestinal secretions have had time to elaborate the food. What proves that purgation is only an exaggerated motor phenomenon is that the use of laxatives hinders neither the stomach contractions nor digestion; the small intestine contracts violently, but the contraction decrease from above downwards; the large intestine remains quiet. The drastics on the contrary disturb digestion as also the gastric contractions. Peristalsis is violent and occupies the entire intestine, even the colon.

The effects of purgatives are multiple.

a. Mechanical Effects.— The first effect is the evacuation of the stercoraceous matter, gas, bile, and undigested food, dimunition of the sense of oppression, produced by the intestine being pressed on by gas, also the greater facility of peripheral circulation.

b. Functional Effects.—In relieving the intestines from the undigested liquids, or the products of irritation purgatives favor the appetite; this applies less to the laxatives than to those containing a bitter principle (rhubarb, aloes, etc).

c. Effects of Local Irritation.—Several purgatives act by producing a local irritation, on which a strict watch should be kept. Most drastics have this effect.

d. Effects on the Hepatic and Intestinal Secretions.—Certain purgatives irritate the mucous surface, and this is probably the reason that there is an excess of the secretory function of Lieberkuhn glands, the liver and pancreas.

e. Consecutive Effectives in the Intestine.—Many purgatives drain off the liquids hypersecreted or natural of the intestines, whence results a diminution in the secretion of the intestine and a tendency to the return of the constipation.

f. Effects on the Blood and Nutrition.—In exciting secretion the purgatives drain off certain useful elements of the blood. The fact has been noted that under the influence of small doses the urea diminishes. (Seegen). If consequently saline purgatives in this dose are the means of decreasing fat, in a large dose, purgatives would cause denutrition and emaciation.

g. Effects of Several Salts.—Purgation has taken place according to the state of the intestine or consistence of the stercoraceous matters, perhaps at the end of two or three hours, sometimes later; sometimes an effect is produced in the stomach by the simple inpression of the salts on the stomach. The first stools are aqueous, fæcal, accompanied with borborygmi and tenesmus, whatever be the dilution of the salt. These evacuations may bring with them the solid matters, but this is not always the case, as they act specially on the intestinal secretions, which is shown by the action of the Pullna Carlsbad or Freiderschshall waters (Epsom salts).

Sulphate of Magnesia, less soluble than soda, more so than the sulphate of potash, has the inconvenience of being passed in great part without alteration in the chamber.

Among the other salts of magnesia may be mentioned the citrate, carbonate and chloride of magnesium. The calcined magnesia is insoluble in the stomach, but dissolves, in the gastric acid. If they escape the action of the gastric juice, they encounter a more dissolving acid in the large intestine, in which case the purgative action is tardy. I associate often with the magnesia cream of tartar in equal quantities, a half a drachm to three quarters, once or twice a day. To these salts may be added, with advantage, an inert powder like powder of calamus. But all the laxative salts requiring repetition have the inconvenience of greatly troubling the digestion by causing the expulsion of the alimentary mass before the assimilable particles are reabsorbed in order to aid the reabsorption of certain digestive liquids which are partially utilized anew. The cathartics, even the salts, are absorbed easily even in the stomach, and in this respect have therefore certain advantages over the other purgatives. If it be advisable to provoke evacuations from time to time, senna, which always has the inconvenience of evacuations at times liquid and painful, should be given. Rhubarb should not be prescribed purely, for its purgative effects as it is difficult to determine the purgative dose. It has beside the inconvenience of provoking a sanguinary afflux toward the hæmorrhoidal veins, but has the great advantage of preserving to the patient his appetite, by reason of the bitter principles it contains. Many patients take purgative pills, of which aloes is the base. It has all the advantages and inconveniences of rhubarb; but among all the anhydrous glycosides which should be comprised in a special category are Scammony, Jalap and podophyllin, which require the intervention of the bile and for that reason are contraindicated in the atonies of hepatic origin. The evacuants that may be used with impunity in dyspepsia are the mechanical means, the purgative salts, and finally certain drastics like aloes and rhubarb.

From J. G. Kiernan, M.D., Chicago, Ill.

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CHEMISTRY.

"Diruit ædificat, mutat."—Hor.

THE STRANGE NARCOTICS.—One of the earliest attempts to expand the popular acquaintance with the practical lessons of chemical science was made in *Johnston's Chemistry of Common Life*, first published twenty-five years ago. The progress of inquiry since that epoch has rendered a new edition of the book desirable, and the work of revision and addition has been carefully performed by Mr. A. H. Church in the volume now issued by the Appletons. Mr. Church is himself favorably known as the author of several lucid and trustworthy handbooks on topics relating to the applications of chemistry, and in the portions here contributed by himself, he has striven, not unsuccessfully, to emulate the cogency of method and simplicity of style which distinguished the original treatise. His additions comprise some valuable matter which has been gleaned by Prof. Johnston and inserted in that writer's private copy of the first edition. Altogether, the book in its present form, deserves to maintain its old preëminence as a readable exposition of the main uses of chemistry in the daily life of man. Of peculiar interest will be found the chapters which discuss the effect of the various narcotics, including opium, tobacco, Indian hemp, the betel nut, the coca leaf, the red thornapple, and the Siberian fungus. Some of the data relating to the least familiar of these narcotising agents deserve particular attention.

Few persons appreciate to what extent certain races are addicted to forms of narcotic indulgence with which Anglo-Saxons are almost wholly unacquainted. According to the work before us, the use of Indian hemp obtains among upwards of 200,000,000 of human beings, dispersed over a large part of the earth, viz., in Persia, India, and Turkey, throughout the whole continent of Africa, from Morroco to the Cape of good Hope, and even in Brazil. One hundred millions of men in China, Hindostan, and the Eastern Archipelago consume, for the same narcotic purpose, the betel nut and betel pepper. Again the chewing of of coca is more or less practised among some 10,000,000 of the human race. As regards the first named of these agents, it seems at first sight curious that the narcotic properties of hemp should never have obtained popular recognition in southern Europe, when we consider that our common plant so extensively cultivated for its fibre, differs in no essential feature from the Indian variety which from the remotest times, has been celebrated in the East for its care-dispelling virtues. In northern climates, however, the peculiar resinous substance residing in the sap is so small that it would naturally escape observation. Yet even in such latitudes the growing plant emits a peculiar smell, which sometimes occasions headache and giddiness in those who remain long in the hemp field. In parts of India the resinous exudation is so abundant that it may be gathered by the hand in the same way as opium. The resin obtained in this way is the most highly prized, and is known as the waxen *churrus*. It appears that even the tops and tender parts of the plant, when dried are powerful narcotic agents, but the seeds, it is said, are not used for this purpose. The preparation known as hashish in Syria is made by boiling the leaves and flowers of the hemp with water, to which a certain quantity of butter has been added, and evaporating and straining the decoction. The butter thus becomes charged with the active resinous principle of the plant, and requires a greenish color. It is apt to have a rancid taste, and hence is commonly mixed with sweetmeats and aromatics, so as to form a sort of electuary. One of these confections used among the Moors is called *el mogen*, and is sold at an enormous price ; another is well known at Constantinople under the name of *madjoun*, and is reputed to process aphrodisiac powers. The dried plant is also smoked, and sometimes chewed, five or ten grains reduced to powder being mixed with common tobacco in a pipe or narghilé. The pure resin and resinous extract are generally swallowed in the form of pills or boluses. In one or other of these forms the hemp plant appears to have been used from very early times. Herodotus, for instance, tells us that the ancient Scythians excited themselves by inhaling its vapor. The potion which Homer makes Helen administer to Tellemachus was prepared from a plant said to have been procured from Thebes in Egypt, where, there is reason to believe, a knowledge of the qualities of hemp existed as early as the eighteenth dynasty (1700 B. C.) There is no doubt that hemp is often mentioned under the name of *beng* in the "Arabian Nights ;" we may add that the derivation of the English word assassin from the hashisheens, or hemp-eating followers of the Old Man of the Mountain, seems to be generally acknowledged. The effects of the churrus, or natural resinous exudation, have been carefully studied in India by competent physicians. We are told that when taken in moderation, it produces increase of appetite and great mental cheerfulness, while, in excess, it causes extraordinary kind of delirium and catalepsy. In the latter case, the limbs of the patient can be placed in every imaginable attitude, and they will remain perfectly stationary in violation of the laws of gravity, the brain, meanwhile, being almost insensible to impressions from without. It has been proved also by experiment that the hemp extract exercises the same extraordinary influence upon other animals as well as upon man, and it is believed that the wonderful feats of the Indian Fakers and snake charmers of India should, in many cases be explained by their employment of this agent. It appears that after the cataleptic trance has passed, the patient is left entirely uninjured. In general, indeed, the effects of hemp upon the human system are pronounced less deleterious than those of opium. Hemp does not lessen, but rather excites the appetite. Moreover, it does not occasion nausea, constipation, dryness of the tongue, or the lessening of any of the secretions, and is not usually followed by that melancholy state of mental depression to which the opium eater is subject. It appears, however, that a long and gradual training to its use is requisite before its agreeable effects can be fully experienced; it is affirmed, also, that the remarkable cataleptic state above described has never been produced in a European.

Almost everywhere in India the betel nut, or *pinang*, which is the seed of the areca palm, is extensively cultivated. As nearly every native chews betel, the consumption of areca nuts is incredibly great. In the Philippines the laborer is paid in betel rolls as he is with coca leaves in some parts of Peru, and the betel nut is one of the most valuable articles of produce in Sumatra. Indeed the total export from the latter island was computed, a few years ago, at ten or twelve millions of pounds, the greater part of which went to China. The betel nut is about the size of a cherry, slightly pear-shaped, very hard, and externally not unlike a nutmeg of inferior quality. In India it is prepared for chewing by being cut into long, narrow strips, and wrapped in leaves of the so-called betel pepper, previously dusted on one side with the quicklime of calcined shells. In the Phillippines, a *buyo*, as the betel roll is called, is offered to every one who enters a house, just as a pinch of snuff or a pipe is in western countries. Every one who can afford it puts a fresh buyo in his mouth every hour, which he can chew and suck for half an hour at least. The visible effects of the betel are that it promotes the flow of the saliva and lessens the perspiration from the skin. It gives a red tinge to the mouth, teeth, and lips, which, though at first sight disgusting to Europeans, is by the natives deemed ornamental. It imparts an agreeable odor to the breath, and is supposed to fasten the teeth, cleanse the gums, and cool the mouth. The juice is usually, but not always, swallowed.

On those who are accustomed to use it, the betel exerts a weak but continous and sustained exhilarating influence, and that this is of a most agreeable kind must be inferred from the extended area over which its use prevails. The chemistry of the betel nut however is quite obscure. It is very astringent, and abounds in a peculiar species of tannin, which is extracted in India by boiling the nut in water, and is brought to England under the name of catechu. In the moist, relaxing climates of the East, this strongly astringent substance acts beneficially on the system, and to it should probably be ascribed the good effects experienced by a French traveller who preserved his health, during a long and difficult voyage, by the habitual use of betel, while his companions, who did not use it, died mostly of dysentery. But the perfectly understood action of astringents does not account for the giddiness caused by the betel nut in those who chew it for the first time, or for the gentle intoxication it produces in all. These properties seem to imply the presence in the nut of some narcotic ingredient which is as yet unknown. From the fact of no such principle having thus far been detected, some writers would attribute the intoxicating influence of the buyos altogether to the pepper leaf in which the nut is enclosed. It is certain that the leaf of betel pepper is always chewed along with the betel nut as above described, and we know that other varieties of pepper, when used alone, possess narcotic properties. In the absence, however, of rigorous chemical analysis, Mr. Church prefers to ascribe the narcotic effects of betel chewing to the joint influence of the constituents of both nut and leaf, and to the chemical action of the quicklime used along with them, and of the saliva upon both. We may note here that throughout southern India and the Spice Islands every person who owns a little bit of land usually grows the leaves of the *pawn*, or betel pepper, for his own consumption; and the plant may often be seen clinging round the stems of the shapely betel palms which overshadow their dwelling. It is computed that the consumption of the betel nut and betel pepper leaf reaches the enormous figures of five hundred millions of pounds weight every year. Only tobacco, among the narcotics in common use, is consumed in larger quantity than this. In India, indeed, where, on an average not more than twelve cents a head is annually spent for clothing, indulgence in betel forms the second great necessary of common life.

Another variety of pepperworts, known as the *ava*, or long pepper, is extensively used among the South Sea Islanders both as a medicine and as an inebriating draught. The plant has a woody, aromatic stalk, which, when reduced to a pulp and steeped in water, forms an intoxicating beverage. It unquestionably possesses a narcotic influence, which is probably exerted also by the leaves when chewed, as they often are along with the betel nut instead of those of the betel pepper. The half-dozen species of pepperworts which have been chemically examined appear to contain an aromatic oil allied to turpentine, and two active bases or alkaloids. All the three constituents mentioned exercise a beneficial action in cases of intermittent fever, and to this property we are probably safe in referring a portion at least of their salutary influence in tropical regions. Thus, while in betel chewing the astringent property of the nut would check the tendency to internal relaxation, the fever chasing principles of the pepper leaf preserve the health amid the steaming vapors which the hot sun draws forth from swamps and jungles and irrigated rice fields.

We are familiar with the beverages made from the cocoa bean; but, so far as we know, the leaves of a very different shrub or plant, the Peruvian coca, have never been imported into the United States as an article of commerce, although some of the most competent observers, such as Profs. Von Tschudi and Schlechtendal, have affirmed that the coca leaf might be usefully introduced in Europe. The coca plant, which still grows wild on the eastern slope of the Andes, in Bolivia, and Peru, attains the height of six or eight feet, and resembles the black thorn in its small white flowers and thick green leaves. It has been cultivated, however, for a great many centuries, and when the Spanish conquerors overcame the Incas of Cuzco, they found extensive plantations of the herb. It is the sun-dried leaves of this plant which form the coca of South American commerce, and which in Inca times constituted the usual money or medium of exchange in Peru. The taste of these leaves is not unpleasant; it is slightly bitter and aromatic, and recalls that of green tea of inferior quality. It becomes more piquant and agreeable when a sprinkling of quicklime or plant ashes is chewed with the leaves. In the short interval of indulgence in this narcotic, which is invariably conceded to the Indian laborer three times a day, a few leaves are rolled into a ball or quid, and a little powdered lime or alkaline ashes are conveyed to the mouth on the end of a slip of wood, moistened and dipped into his lime flask. The coca leaf acts different according to the mode of use. When infused and drunk like tea, it produces a gentle excitement, followed by wakefulness, and if taken strong, retards the approach of hunger and prevents the usual breathlessness in climbing hills. It is seldom employed in this way, however, but is commonly chewed, as we have said, in the form of a quid, which is turned over and over in the mouth, as is done with tobacco. Taken in this form, its action is not only more gradual and prolonged, but also different in character, because the continued influence of the saliva, and of the lime or ashes masticated at the same time, extract from the leaf certain constituents which water alone does not dissolve. In the eastern part of Brazil the coca is used somewhat different. There the leaves are dried and reduced to a greenish-gray powder, a portion of which is introduced into the mouth from time to time. The excessive chewing of coca causes, we are told, a bad breath, pale lips and gums, greenish and stumpy teeth, and an ugly black mark at the angle of the mouth. What is known as a *coquero*, or coca drunkard, may be distinguished at the first glance by his unsteady gait, his yellowish skin, his dim and sunken eyes encircled by a purple ring, his quivering lips, and general apathy. The same observer, however—Prof. Von Tschudi, who thus describes the baneful effects of coca juice when taken in excess—is clearly of opinion that the moderate use of the leaf is not merely innocuous, but posiitively conducive to health. In support of this conclusion he points out that among the Peruvian Indians, who are accustomed to masticate coca three times a day, several have attained the great age of 130 years, and that even the coca drunkard, who has indulged in the leaf to excess from boyhood, reaches the age of 50 years.

All of those Europeans who are best acquainted with the Indian races of South America, and who have scrutinized the action of the coca plant upon them, concur in affirming that, in addition to the ordinary properties of a weak narcotic, the coca leaves possess two extraordinary qualities not known to coexist in any other substances. These are, first, that when chewed they lessen not only the desire, but also the necessity, for ordinary food. They do not merely enable the chewer, as will brandy and opium, to put forth a greater nervous energy for a short time, but actually, with the same amount of nutriment, perseveringly to undergo more fatigue and protracted labor. Von Tschudi had in his employ a Peruvian miner 62 years old, who worked for him on one occasion twenty-two hours a day for five consecutive days, during which period he tasted not an atom of food, but at regular intervals of three hours chewed half an ounce of coca leaves—swallowing, be it noted, the saliva. How this remarkable effect of the coca is to be accounted for in accordance with received notions on the subject of nutrition, it is difficult to see. The least that we must concede to this plant seems to be that it arrests all processes of decomposition to the extreme degree compatible with activity of the physical organs, and enables the body to feed upon itself for an extraordinary length of time, without the hunger pains and weakness which normally accompany prolonged abstinence from food. The other surprising but perfectly attested property of the leaf is, that either when chewed, or when taken in the form of an infusion it prevents the recurrence of that difficulty of respiration which is usually felt in ascending the long and steep slopes of the Cordilleras and the Andes. The reason of the action of this leaf is, up to the present time, not less inscrutable than that of its self-sustaining capabilities. In view, however, of these properties, whose existence is established beyond dispute, we can understand why Prof. Von Tschudi should recommend the introduction of coca in the European navies as well fitted to afford a refreshment to seamen, as well as to other persons engaged in equally arduous toil. Another advocate of the plant, in a work entitled "Per la de America," has lamented that coca has not taken the place in Europe now occupied by tea, coffee, and the cocoa bean. It is, he observes, melancholy to reflect that the poor of Europe cannot obtain this preservation against hunger and thirst, and that our working people are not supported by this strengthening plant in their long-continued labors. It appears, however, that notwithstanding the hardest packing, the coca leaves insensibly give off their volatile ingredients, as hops do, and by transport and keeping continually dimiinsh in value and estimation. As regards the chemical analysis of the coca leaf, it has thus far been found to contain at least three different constituents, upon whose joint action the observed effects probably depend. These are an odoriferous, resinous substance, a bitter principle, and a species of tannic acid. It will at once strike the reader that even our imperfect knowledge of the plant's chemistry discloses a singular analogy between the coca leaf, the hop flower, and the tea leaf of China. Yet all attempts to explain the extraordinary effects of coca, although the inquiry has been aided by what we know of the action of tea and of the hop, have thus far wholly failed.

The history of the employment of thorn apples and of the Siberian fungus as familiar narcotics, is almost equally interesting. From the fruit of the red thorn apple of Peru some of the Andean Indians prepare a strong narcotic drink, by whose use they believe themselves brought into communication with the spirits of their forefathers. In lower India the seeds of the common thorn apple are employed for the purpose of drugging travellers, and are said to produce an intoxication of twenty hours duration. In England the seeds are rarely used, except upon medical prescription. but when an overdose is taken it is observed to cause delirium accompanied by spectral illusions. In such cases the symptoms resemble very closely the reported effects of the seeds of the red thorn apple on the Indians of Peru and New Grenada. The narcotic property of the thorn apple, by the way, is affirmed by some authors to have been used by the priests of the Delphic temple in ancient Greece to insure those frenzied ravings which were then called prophecies. It is certain that such a practice obtained at the epoch of the Spanish conquest in the Temple of the Sun at at Sogamossa, near Bagota.

To the native of Kamtschatka, the Siberian or intoxicating fungus is what betel and henbane are to the southern Asiatics, or what coca is to the Peruvian, and tobacco to the European and North American races. It has a close resemblance to some of the edible fungi, and is not uncommon in birch woods in some parts of Great Britain. In color it varies from a bright scarlet to a pale umber, the cap is dotted with warts. In Kamtschatka it is sometimes steeped in the expressed juice of the native whortleberry, and imparts to this liquid the intoxicating properties of strong wine. The most common way of using it, however, is to roll it up in the form of a pill, and to swallow it whole without chewing. If chewed, it is said to disorder the stomach. The desired effect comes, on in an hour or two after the dose is taken; cheerfulness is first produced, then the face becomes flushed, giddiness and drunkeness follow in the same way as from wine or spirits, and sometimes the final effect is a total loss of consciousness. In other cases, it provokes to remarkable activity and stimulates to bodily exertion. It is said, for instance, that a man intoxicated with this agent is able to carry a sack weighing 120 pounds a distance of fifteen versts. The chemistry of this plant is still obscure, but, so far as its analysis has been carried, it is found to contain two peculiar constituents, one a base or alkaloid, and the other an acid which is probably the active inebriating element. The must astonishing effect of this fungus is the property it transmits to the fluid excretions. It has been known from time immorial to the inhabitants of Siberia that a man who has been moderately affected by the fungus, and has slept himself sober, will, by drinking, as is the custom among the Ostiaks, a teacup of his own urine, becomes more completely intoxicated than before.

The reader of the foregoing data will be struck with the grave deficiencies in our knowledge, both of the chemical nature and the physiological action of the narcotics used by large sections of the human race in Asia and South America. The field of study which they present is indeed captivating and extensive, but hitherto the materials and opportunities for cultivating it have offered themselves rarely, and to but few individuals. It still remains to ascertain, by direct and reiterated experimdnt on man and on the lower animals, the subtle chemlcal changes which such agents as Indian hemp, the betel nut, the coca leaf, and the Siberian fungus bring about in the functions of the human organism.—*Ex.*

Wm. R. Warner & Co.—One of the most remarkable facts in Journalism is that this distinguished House has occupied the page opposite the last page of the reading matter of this Journal since March, 1866; fifteen years!! In not a single issue has their advertisement failed to appear, during that long period. It is gratifying to know that the House receives from the Profession that absolute confidence and liberal support, to which it is so fully and unequivocally entitled,

Parke, Davis & Co., Detroit, Michigan, present a most enviable record to the Profession on the question of the copyright and patent nostrum policy. While so many Houses professing to advertise only for physicians are advertising all kinds of copyrighted and patented nostrums in the daily Press, this House confines itself to an open business, "a fair and above-board" policy. All that it offers for sale is in composition, even in proportion, fully and truthfully stated, and it touches nothing that is either patented or copyrighted. Such a course does more than to deserve support, it secures it; and deservedly.

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

"Gynomania"—A Curious Case of Masturbation.—Dr. H—— sends us the following account: "Permit me to offer you for publication a brief description of a curious case of prolonged masturbation, which came before me in the course of my regular practice. The details I have gathered from the patient at various times, and give them as fully as consistent with concealment of his personality.

"The patient is a highly cultivated gentleman of high moral character, the father of three or four healthy children, the result of an unusually happy marriage. 'At an early age,' said he, 'long before puberty even, I had acquired a taste for indoor games, female pursuits, and even attire, although the latter desire was never satisfied farther than wearing girls' shoes. I was also an admirer of small waists in ladies, and at the age of fourteen tried to procure or make for myself a pair of corsets. As I grew older my fondness for female dress increased, but having no sisters I could find no opportunity to gratify it farther than by reading stories of female impersonations, etc. I composed several stories entitled 'Adventures in Hoops,' and detective stories founded upon such plots. They were printed and extensively copied. To this day, said he, I seldom miss an opportunity to see men take female parts on the stage, especially the more refined ones, like Leon, Byrnes, etc.'

"At the age of twenty-one years he began the use of corsets, of which he is still very fond, and although he laced himself very tightly for several years he seems to have suffered no injury from it. He confessed that he has always derived a certain amount of sensual gratification from their use, and although at first he experienced some pain in the pubic region, and erections, he has since found that as soon as his corsets are pulled quite tightly erections cease, and that coition, as well as voluntary discharges, are *impossible* when tightly laced.

"From fear of impotence or other evil that might result from masturbation before marriage, he carefully avoided voluntary discharges of semen and remained perfectly continent before marriage. He recollects, however, having had three involuntary emissions while awake. The first occurred while horseback riding, and induced him to abandon this otherwise healthful exercise. The others happened while putting on a pair of very tight shoes (ladies' boots with French heels), and buttoning them.

"After marriage he abstained from corsets and other articles of female attire (with rare exceptions), until two children had satisfied him of his potency.

"About this time our patient began to yield to the temptations which everywhere beset him, and returned to the very source whence he had first derived unlawful pleasure. But I will let him tell it. 'I purchased,' said he, 'a very stylish pair of ladies' high boots with French heels, which were at first tight enough to make me limp.' These boots he boldly wore upon the promenade in fine weather, with pants elevated to show the heel. In bad weather he was wont to put on these boots and button them in front of a long mirror, about once a week. This seldom failed to cause not only an erection but also an emission.

"When this had lost its novelty he purchased a pair of corsets, not having worn them since marriage. As often as practicable with concealment he wore these, and laced them sometimes to faintness. These two articles, buttoned boots and corsets, seemed to have a most peculiar infatuation for him. Often while riding in a street car, if a lady with a small waist or pretty foot sat opposite, he would have a sort of mental coition, he called it, with this innocent paramour, an emission. M. Rouband mentions the only case at all similar, where a young man was impotent except with a light-haired woman wearing corsets, high boots, and a silk dress. (See Van Buren and Keys, p. 451.) The last three articles had a powerful influence on our patient, whether they were worn by man or woman.

"After this he advanced step by step down the ladder, purchasing various articles of female attire, until at length he bought a black silk dress, which he had made to fit him very tightly and in which he took great pride. Curls and switches, false hair, earrings and breast pins, all aided in feeding this peculiar fire. He would even sit for hours tightly laced, while a lady hairdresser curled and frizzed his hair like a woman. At length he went so far as to walk the city streets and even attend church, wearing his new black silk dress caught up on one side so as to expose a white fluted skirt, beneath which his high-heeled French boots were visible. With heavily padded chest, tightly squeezed waist, enormous bustle, his hair tortured into fantastic forms, his ears in screw vices, and his feet crowded into the narrowest and most uncomfortable boots, he would walk for miles, or dance for hours, with great pleasure. In fact, physical pain seemed essential to his happiness, and he thoroughly and deeply enjoyed it, if it were only the pain inflicted by female attire. He imitated their manner and habits to some extent, yet never used his disguises for improper purposes, except to excite an occasional emission.

"As before stated, he had always been an advocate of tight lacing, had read extensively upon the subject, and collected all the literature that in any way favored or defended it. He several times tried to lace himself tightly enough to faint away, but never could. He even persuaded his wife to lace, and daily tightened her corsets, until he actually reduced her waist nearly *six inches*, which also gave him sensual gratification. A child born of her soon after was perfectly healthy and well formed.

"He showed me several pictures of himself in all sorts of dresses, as a ballet girl, as Queen Elizabeth, as a Polish maiden, an old maid, the Goddess of Liberty, as Juliet, and in the plain street dress, which he wore to church a few years ago.

"Many times he swore off, but in vain. Sometimes he would remain free from his peculiar vice for weeks and months, when it would return with renewed vigor. I found him eating largely of animal food, but not of fat meat. Nitrogenous food alone suited his palate. I advised a vegetable diet, but he found it distasteful to such a degree that I was forced to withdraw it. He used no stimulants except weak tea and coffee. Gave bromides for awhile and hope at length to conquer. Have any of your readers had a similar case within their experience? I proposed the name of Gynomania for it."—*The Medical Record.*

COTTAGE ASYLUMS.—Dr. G. C. Catlet, St. Joseph, Mo., in charge of a State Lunatic Asylum at that place is eloquently in favor of cottages for asylums. What superintendent will next advocate this wholesome and necessary reform?

PERITORNEAL INJECTIONS. — The injection through the linæ alba of defibrinated blood into the peritoneal cavity is being used with marked success in cases of extreme anæmia.

RESECTION OF SMALL INTESTINE. —Kœberli has reported to the French Academy, cases of resection of small intestine, and advocates this operation.

This is not new ; the operation was successfully performed at Manassas Junction, Va., during the war.

SULPHATE OF OXYGEN.—The Medical *Record* (N. Y.) states that *Sulphate of Oxygen* was used to stimulate the late Czar, after his fearful disaster. What does it mean ? And who ever heard of such a preparation ? Is there at last "something new ?"

GONORRHŒA.—Injection of boracic acid (one per cent. solution in water) is strongly recommended by Dr. James G. Hyndman, in the *Cincinnati Lancet and Clinic*, for the treatment of gonorrhœa of either sex. After using this anti-blenorrhagic in five cases, with excellent effect, he thinks that twice a day is often enough to use such injections.

THE INUNCTION OF CASTOR OIL AS A PURGATIVE.—The Louisville *Medical News* credits the *British Medical Journal* with the following practical suggestion of R. H. Hilliard, M.D.: "I have frequently applied castor oil to the abdomen, under spongiopiline or other waterproof material, in cases where the usual way of administering by the mouth seemed undesirable, and with the happiest results. Within the last few days, in a case of typhoid fever, I applied half an ounce of castor oil in this manner, under a hot-water fomentation, which relieved the constipation and tympanitic distension which had been present, without undue purging or irritation of the bowels."

ANECDOTE OF THIERRY DE HERY. —One day, while this once-famous syphilographer was sauntering through the crypts of St. Denis, paying little attention to the various royal tombs about him, he suddenly precipitated himself before an effigy and began to pray. The verger, who was standing near by, called out to him: "You mistake, sir ; that is not a saint's tomb, but that of our late king, Charles VIII." "Simpleton," replied De Hery, "learn that the good king Charles VIII. is more than a saint to me, as he imported the pox from Italy, and has been my benefactor to the amount of thirty thousand pounds a year."—*Canada Lancet.*

DRESSING SLIGHT WOUNDS.—In dressing slight wounds, simple cerate or vaseline has been in constant use for some time. Of late, however, carbolized oil has been substituted for these, and has given great satisfaction. The proportion of carbolic acid to olive oil is one to sixteen, and it is found that the two will mix readily, and the effect of the acid is permanent, since it does not evaporate from the oil as it will from water. Its local action is soothing, both from the bland nature of the oil and the slightly anæsthetic effect of the acid. It makes a clean dressing when applied to the surface of a wound upon a piece of lint or oakum, and not only keeps the wound clean, but at the same time disinfects it.—*Notes of Bellevue Hospital Treatment in Chicago Medical Review.*

SUPPLY OF SEA-WATER TO LONDON.—A project is now before Parliament by which it is proposed that the sea-water shall be taken from the English Channel, at Lancing, about eight miles west of Brighton, and, after being pumped to a sufficient height, will gravitate to London. The roads and streets, along which it is proposed to lay the mains, are macadamised, no paved roads being interfered with. The pipes between Putney and Walham

Green will be ten inches in diameter, other pipes in London will not exceed six inches in diameter. The water will be discharged in Battersea, Hammersmith (near Addison Road station), and in Victoria Street, Westminster. At each of those places, bathing establishments, comprising two swimming baths of one hundred and fifty feet by fifty feet each, and numerous private warm baths, will be erected. At six of the principal swimming baths in London, five charging 6d. and one 1s., the daily average for one hundred and twenty days in the year is eight hundred bathers at each bath. It is proposed to charge for the swimming baths, 6d. first class, and 3d. second class, and, providing the School-Board for London approves the project, as affording opportunity for children attending the board-schools to learn swimming, 1d. for each child. Within a radius of one mile from each bathing establishment, it is estimated that there are not fewer than twelve board-schools, numbering five thousand boys above the age of ten; two thousand of these children would, probably, under certain regulations, use the bath at stated intervals. Dépots will be established, and stand-pipes erected for the distribution of the water for use in private dwellings, hotels and hospitals. The charge will be one halfpenny per gallon if delivered, and less if taken at the dépot, and to large consumers it will be 2s. 6d. per thousand gallons. Provision is made by the Bill to lay, subject to the sanction of the local authorities, distributing pipes, to convey the water into private houses. Applications for a continual supply of sea-water were received last year from householders and hotel-proprietors, whose consumption would have yielded to the company an income of £2,500 a year. It affords strong evidence on the part of the public to have a supply of pure sea-water placed within their reach. Over one hundred physicians communicated their approval of the project as an important sanitary measure, and one which would be highly beneficial to the health of residents in London.—*British Medical Journal.*

[It is to be hoped that New York and all maritime American cities will do likewise.—ED.]

THE TREATMENT OF GONORRHŒA.—Mr. W. Watson Cheyne, assistant-surgeon to King's College Hospital (*British Medical Journal*, July 24, 1880), has carried out a series of experiments in the treatment of gonorrhœa which are worthy of being extensively known. It has been demonstrated by Neisser that organisms are present in great abundance in gonorrhœal pus, and Mr. Cheyne has verified the observations by inoculating cucumber infusions with some of the discharge. Acting upon the known effects of certain antiseptic materials, he decided to adopt iodoform and oil of eucalyptus. In order to bring them into certain contact with the suppurating surface, he had bougies made of these materials and cacao butter. The formula is—5 grains of iodoform, 10 minims of oil of eucalyptus, and 85 grains of cacao butter. This bougie is introduced into the urethra, and a strap and pad over and around the orifice retains the bougie there until it is dissolved. After this, an injection of boracic lotion (saturated aqueous solution of boracic acid) or an emulsion of eucalyptus oil (one ounce of eucalyptus oil, one ounce of gum acacia, water to forty or twenty ounces), to be used for two or three days. At the end of that time injections of sulphate zinc, two grains to the ounce, may be begun. For a day or two the purulent discharge continues, but afterwards it steadily diminishes in amount, becoming in four or five days mucous, and ceasing altogether in a week or ten days.

THE DESTRUCTION OF TRICHINÆ. — It is commonly believed that ordinary cooking will destroy trichinæ and render infected meat innocuous. Without doubt, as has been stated in the daily press, "the encapsuled parasites cannot survive a certain elevation of temperature, and death renders them harmless." It is, however, correct to say that a "complete means of protection is furnished by the heat incident to cookery?" Considerable doubt is thrown on this statement by M. Vacher of Paris, whose authority is of considerable weight. He affirms that the protection given by cooking is quite illusory, and that in the thorough cooking of an ordinary joint of meat the temperature in the centre is not sufficient to ensure the destruction of the parasite. He took a leg of pork of moderate size and boiled it thoroughly. A thermometer placed within it at a depth of two inches and a half, registered after half an hour's boiling 86° F., after boiling for an hour 118°, after an hour and a half 149°, and after two hours and a half, when the joint was thoroughly cooked, 165°. This temperature M. Vacher maintains is insufficient, and we must remember that at the centre, which is still further from the surface than the bulb of the thermometer was placed, the temperature would not be so high. "Trichinæ would escape almost entirely the action of boiling water" in cooking. M. Vacher's note was communicated to the Chamber of Deputies, and no doubt has influenced the decision of the French Government to prohibit entirely the importation of American pork.

A PECULIAR CASE.—Dr. Julio J. Lamadrid, of Brooklyn, N. Y., very kindly sends us an abstract of a peculiar case originally published in *La Union National.* It is that of a brunette female, thirty-seven years of age, who has, upon the external surface of her abdomen, a tumor resembling the face of a fœtus and possessing teeth.

"On the anterior walls of the abdomen, a little to the left of the median line, and about one and one-half or two centimetres below the navel is seen a hemispheric tumor of about eight centimetres in diameter, of a parched appearance and reddish color, which, on further examination, appears to be part and a continuation of a large tumor concealed within that cavity, and easily identified to be intimately connected with all the textures of the walls of the abdomen. On its surface the following objects are noticed: in the superior maxillary bone are seen two lateral incisors exposed to view, of a regular size, but dark in appearance, due to their carious condition and constant exposure to the air. The right lateral incisor is loose and could be extracted with the least effort, the other, however, remains fixed and firm. These two teeth are partly covered by an eminence in the form of a lip of about two centimetres in length, one in width, and forty millimetres in thickness; the latter, on being lifted by the fingers, reveals to view the right central incisor; this is smaller and firm to the touch. In addition, it also reveals a few fleshy bodies or papillas lightly moistened by a liquid, a little of which, examined under a high power microscope, shows it to consist of squamous epithelial cells, filaments of fungi, and a granulous substance, the character of which reamins undetermined.

"The gum which separates the three teeth is of a natural red color, but there does not exist any vestige of the inferior maxillary bone. Finally, the observer, in his imagination, and in trying to look for the other parts or organs of the face, can scarcely perceive two dim spots, intended, no doubt, to represent the position of the eyes, also a slight depression on the right side, and a few lines over the lip, indicating, perhaps, a place for the right nostril."

THE THOMAS WILSON SANITARIUM.—In 1875, Mr. Thomas Wilson, of the city of Baltimore, established a sanitarium for the sick children of the city of Baltimore, and by his will bequeathed to it the sum of five hundred thousand dollars. The board of trustees, of which Mr. Francis T. King is president, selected the following physicians to advise them in regard to the execution of the trust:—Drs. Garrett Anderson, of London; Dr. Jacobi and J. Lewis Smith, of New York; Meigs of Philadelphia, and Busey of Washington. These physicians, in compliance with the request of the board, have submitted their advice and opinions in the form of essays, setting forth the causes and prevention of the Summer mortality of young children. The Trustees have made with Houghton & Co., of Boston, a contract for the publication of these five essays, in a volume. It is now going through the press, and it is hoped will be ready for distribution during the early spring.

"DEAN" BUCHANAN—*The Chief of the Diploma Manufacturers Discloses the Secrets of the Trade.*—The Philadelphia *Record* publishes the confession of the bogus diploma vender, "Dean" John Buchanan, who is now undergoing imprisonment in consequence of the exposure some time ago of the character of the different medical colleges with which he was associated. It will say:—"He has given up all the books he had—the matriculation books, the minutes of faculty, minutes of the trustees, account books, alumni minutes—and a mass of valuable information, including a list of foreign diplomas sold and a catalogue of addresses including over five thousand names of persons who had corresponded with him. He gives the names of wholesale druggists in Philadelphia who have sold his diplomas, and he gives the names of the parties to whom the diplomas were issued. He relates how diplomas were signed by the faculty, how in one instance three professors, for $5 each, signed 500 diplomas for him, and how, for $3.50, the diplomas which were to go abroad were certified to by a Spanish Consul. In all about ten thousand names are tangled up in his disclosures. He has given the names of many professional malpractitioners and the means whereby they destroy life. He tells of the tricks of his trade, the quack nostrums that are advertised to cure all diseases, and of the impostors who prey on public credulity. He recites incidents wherein he robbed graves, and how on one Saturday morning he stole five dead bodies from Blockley Almshouse. He tells how he kept himself clear of the courts and their penalties. He tells of twenty-five concerns in this country and in Europe by which degrees are sold. He figures that fully twenty thousand bogus diplomas are current in America and 40,000 more in Europe. He gives the authorities a lever by which they can uproot every diploma dealer in America.

BUCHANAN'S BOGUS SUICIDE.

From Buchanan's papers are gathered the following details of his attempt to lead the public to believe that he had committed suicide by jumping from a ferryboat into the Delaware River in August last:—On the night in question Buchanan went to the Market street ferry where Vanduser and a man named

Sheppard, better known as "Shep," were in waiting. Buchanan gave his coat to his double and then drove off in a carriage to the connecting railroad junction, and "Shep" passed on to the ferryboat, to be saluted by Holton as "Doc" and to be pointed out by Vanduser as Dr. Buchanan. "Shep" had nothing to say to any one on the boat, and this point was used by Vanduser to impress on the deck hands the fact that "the doctor is acting strangely to-night." As the ferryboat turned to to enter the canal separating Ridgway Park from Windmill Island a skiff passed its bow and lay close in under the shadow of the piles. "Shep." stripped himself of Buchanan's coat and plunged overboard, and with a few strokes caught hold of his partner's skiff and, clutching lightly to the stern, was hauled down the river to below Point Airy, where he clambered in and was rowed along the Jersey side of the river, thence across to his home in Kensington.

BOGUS COLLEGES BROKEN UP.

As a result of the exposure of Buchanan's business the charters of the American University of Philadelphia, the Eclectic Medical College of Pennsylvania, the Philadelphia University of Medicine and Surgery, and the Livingstone University of America (at Charleston, W. Va.), have been annulled, and bills have been introduced into the State Legislature to repeal the charters of Quaker City Business College, the Penn Medical University, the Philadelphia Electropathic Institute and the Philadelphia College of Medicine.

Ulcerating Surfaces and Abscesses.—In ulcerating surfaces and abscesses which show no tendency to close, the treatment must be directed toward the production of healthy granulations. This is often difficult to accomplish, and various applications are employed to stimulate the surface. Balsam of Peru is used largely in the hospital for this purpose. Where this does not succeed, the following combination is usually successful:

℞ Hydrargyri nitratis, . gr. xx
Iodoformi, . . gr. xxx
Camphoræ, . . . ʒ ij
Balsam Peru, . . ℥ ij
M. Sig.: Stimulating balsam.

Chloral hydrate may be substituted for the camphor in the mixture. This is applied to the surface or injected into the abscess after the latter has been thoroughly washed out with carbolized water once a day, and rarely fails to stimulate the growth of healthy granulation tissue. When œdema sets in around a wound, and there is danger of cellulitis, the part is kept moist by frequent application of lint wet with lead and opium wash, as this is more efficacious than any other lotion. The proportions of the lotion are one ounce of tincture of opium to half an ounce of subacetate of lead in half a pint of water.—*Notes of Bellevue Hospital Treatment in Chicago Medical Review.*

Cæsarean Section Extraordinary.—Dr. Gaston Boyd writes to the *Kansas Medical Index*:—A most remarkable and fruitless attempt at Cæsarian section was made on December 15th, by a German girl on her own person. She made an incision one inch in length, one inch to the left and a little above the umbillicus, penetrating the abdominal cavity. On being asked by the attending physican why she did this, replied, "that she might introduce her finger (which she did) and remove her child, as she was four months pregnant." Finding that her efforts failed, she procured a needle and thread and sewed up the gash. It is hardly necessary to add that she was a corpse in two days. At the post-mortem examination, on opening the abdomen, it was found there had been internal hæmorrhage and extensive peritonitis, with violent inflammation of the intestines and abdominal walls, and that the uterus was not pregnant, or presented any appearance of having been so recently.

IN MEMORIAM.—Dr. R. O. Cowling, of Louisville, Ky., died suddenly, of rheumatic endo-carditis, April 2d, 1881. He was born near Georgetown, S. C., April, 1839. His father, J. V. Cowling and and his mother Sarah Cowling, (daughter of Chancellor James, S. C.,) are now living, with two brothers and a a widowed sister. Dr. Cowling was educated where he died. He graduated at Trinity College, Hartford, in 1861. That College conferred its degree of A.M. on him in 1865. He visited Europe in 1862 and 1872, and gained much information which was used most beneficially by himself and instructively to his friends. He studied medicine in 1862; receiving one course at the University of Louisville, he graduated at Jefferson in 1867. He was a pupil of his accomplished editorial colleague, Dr. W. H. Galt, of Louisville, Ky., who was with him through his illness and at the last moment of supreme agony. He filled successfully the positions of Demonstrator, and Prof. of Theory and Practice of Surgery in the Medical Department of the University of Louisville. These duties he discharged with great success and ability. He received from this Institution its *ad eundem degree*. He founded the Louisville *Medical News* in 1867, and was its chief editor when he died. His editorial work was always conducted with great ability, and gave to his Journal a well deserved popularity and a wide-spread influence. His "Aphorisms in Surgery" manifest marked eclectic and analytical power, and receive deserved and general commendation. He died chiefly as the result of exposure while discharging his duties as Surgeon of the Short Line Railroad. He leaves a wife (formerly Miss Mary Churchill) and three daughters, with a very wide circle of devoted friends, to mourn his loss. His funeral was attended by the Profession en masse and by a multitude of citizens by whom he was justly beloved. The Assistant Bishop of Kentucky, the venerable rector of Christ Church, with others of the clergy officiated at his imposing funeral, and all of the the Societies and Colleges offered eloquent and deserved eulogies upon his life and record. Added to all of which, there is laid upon his recent grave this simple tribute, from one who admired him always, and watched with pleasure his deserved successes and his merited honors.

As a man; as a physician and surgeon; as a teacher, author and editor; as a son, husband and father; as a citizen and friend, Dr. Cowling received unlimited confidence and praise; and he deserved all that all loved to bestow. He was a member of Christ church; once Superintendent of its Sunday School; and was buried by its Pastor who gave and received always a deep and devoted affection.

His loss is great indeed, and he will be always faithfully and kindly remembered.

AMBROSE KNOX RAMSEY, M.D., died at his residence, near the city of Belton, Texas, January 23d, 1881, of an acute attack of pneumonia, of brief duration.

Dr. Ramsey was born in Marengo County, Ala., 11th March, 1833. When a youth he attended school at Summerfield, Ala., subsequently he attended the literary department of the University of Va., where he graduated in 1853. In March 1855 he graduated in the medical Department of the University of La. In 1857 he came to Bell County, Texas, where he has resided ever since, except four years during the great civil conflict, until his death. In 1861, when the tocsin of civil war was given, he immediately returned to his native state, and at once raised a company for active service. His was Company A. Jeff. Davis Legion. In 1865, when the flag he had served so faithfully and loved so devotedly, went down in darkness and gloom, to be unfurled no more forever, he returned to his adopted state, since which time, till the day of his death, he enjoyed the confidence, respect and esteem of a very large circle of friends.

For some time after the close of the war, he was one of the editors of the *Belton Journal* and while thus engaged, made quite a reputation as a terse, forcible writer, as well as for his high-toned conservative course in treating the great questions that then convulsed the public mind.

Being a gentleman of sterling integrity, of the highest type of nobility and honor, and of the purest kindness and consideration towards all, he was loved and prized by all who knew him.

In his life work—the practice of medicine, he *always* observed those rules of professional etiquette, never *stooping* to sordid or contracted views upon any subject; thorough in preparation, refined in sentiment, he was ever noble in his practice and intercourse with his brethren. No gentleman ever accused him of being guilty of any of the "Black Arts in Medicine," that are known to characterize so many members of our exalted profession. He was as sympathetic as a child, tender as a woman, and his charitableness toward the poor and suffering was often largely in excess of his means. He was always glad to respond to the calls for help, exhibiting a spirit of liberality that could not be measured by dollars and cents. He was composed of truth, honor, chivalry, principles, patriotism, charity. He was twice married, first to Miss Kingsberry, and long after her death to Miss Taylor. He leaves seven children, one by his first wife and six by his last, with a large number of citizens to mourn his death and lament their great loss. His oldest daughter, quite an accomplished and intelligent lady, is the wife of Mr. P. L. Ellis, a merchant of this city.

Let us cherish his sacred memory, emulate his noble virtues, and strive to act well our part in the battle of life, knowing that the principles of integrity, honor, and charitableness of our friend, whose death we deplore, are essential features of that manhood that prophesies its future enthronement amid the grandeur of the universe. H. C. GHENT.

MEDICAL NEWS.

"Nulla dies sine linea."

THE Ohio *Medical and Surgical Review*, (Youngstown, Ohio), has been discontinued, as the editor, Dr. H. G. Cornwell will go to Europe for several months. Its publication will be resumed at Columbus on his return.

LORD BEACONSFIELD'S illness at least will not be attributed to trichinosis of American origin.

CHICAGO Doctors, it is said, write their prescriptions so badly, that the druggists go to meet their country relations *as often as the Grand Jury meets.*

GOOD CITIZENS AS WELL AS GOOD DOCTORS.—In the great effort which the citizens of this city are making to secure clean streets and a lower death-rate, the doctors have done magnificent work. First in the citizens' first meeting, then in the citizens' second meeting, and lastly in their own meeting. They have abundantly proved through their officers and speakers that they are good citizens as well as good doctors. At the doctors' meeting held at Chickering Hall, Dr. Willard Parker presided. The Vice-Presidents, (seventy in number,) represented the best elements in the medical profession of the City, and able speeches were made by Drs. Willard Parker, Fordyce Barker, W. H. Draper, E. G. Loring, A. L. Loomis, John G. Peters, D. B. St. John Roosa, Lewis A. Sayre, J. C. Dalton, and others. The resolutions passed were strong, and will do excellent work, and the meeting will long be remembered as one of the most important acts and events in the professional history of this City.

BEACONSFIELD,S DOCTORS. — Dr. Quinn has been called upon to defend himself before the College of Physicans for consulting with Dr. Kidd, who is an eclectic practitioner. Dr. Quinn explained that before seeing Lord Beaconsfield he received a letter from Dr. Kidd saying he was not treating the case homœopathically, and that every direction and prescription of Dr. Quinn's would be faithfully carried out. From a letter of Dr. Kidd to the medical journals it appears that Sir William Jenner absolutely refused a consultation prior to the summoning of Dr. Quinn. Lord Beaconsfield shows some gain of strength, and power to take nourishment.

A SWINDLER.—A rather prepossessing individual, representing himself to be a son of Dr. F. Peyre Porcher, of Charleston, S. C., is "going the rounds" and asking assistance sufficient to enable him to reach his home. The editor of this journal escaped being victimized to the extent of $50.00, only by telegraphing to his friend Dr. Porcher. Any one who will place this individual in the hands of the Police will confer a great favor upon Dr. Porcher, and the public generally.

MEN OF PROGRESS.—There is soon to be published a work with this title. The publisher calls upon the physician who dictates his own life; he next pays for an engraving of himself and presto becomes great. It is difficult to escape such a fate.

THE Medical Department of the University of New York and the Jefferson Medical College, have had the largest number of graduates on record. A witty writer says, that these Institutions are trying (successfully) "not to be too good for this wicked—wicked world."

DIED.—On Feby. 5th, 1881, at Morgantown, Ky., Nannie Lee, aged 19 years, beloved daughter of Dr. R. B. Morehead, of the same place.

THE friends of Dr. J. P. Thomas of Pembroke, Ky., will be pained to learn, that he lost his infant son, Townsend Gaillard Thomas, of scarlatina, on the 6th of March.

A WESTERN HOUSE guarantees its "old-fashioned, hand-made, sour-mash whiskey, sold in bottles five years old." These bottles are certainly as old as the most exacting could require.

COLLEGE OF PHYSICIANS AND SURGEONS, BALTIMORE.—The faculty of this institution have decided to lengthen their curriculum to six months, and, to obtain the doctorate a student must have read medicine under a preceptor for one year and have attended two six months' courses.

ALUMNI ASSOCIATION OF JEFFERSON MEDICAL COLLEGE elected Dr. S. D. Gross President and Dr. R. O. Cowling Orator. A motion construed as somewhat a dictation to the Faculty was promptly withdrawn.—Dr. Bartholow delivered the valedictory to the Class and Dr. Hamilton Osgood the Alumni oration.——Dr. W. A. B. Norcom—The many friends of this gentleman will be pained to learn of his death.——Dr. I. W. Hughes, of Newberne, N. C., died Feb. 4, 1881.——What does it mean? The N. C. *Medical Journal*, speaking of Bellevue College, says, "circulars to be issued from the College in April, will explain the changes filling the syringe."——*The Medical Review of the Drug Trade* states the price of quinine has increased since the duty on it has been removed.——The *Index Medicus* is in danger of failure. Its publisher, F. Leypoldt, 14 Park Row, N. Y., has met his losses manfully, and as the enterprise is a most worthy one, it is hoped that the Profession will come to the rescue. Price $6.00.——The American Medical Association meets in Richmond, Va., May 3d, 4th, 5th, and 6th. Dr. Edwards will issue a daily edition of the Proceedings: ten cents a copy. He ought to have a large support and deserves it.——The N. C. *Medical Journal* gives all its earnings to the N. C. State Board of Health, which receives but $200 per year from a stupid Legislature. That Journal so fully deserving support, for that act alone should receive a magnificent reward from the profession.——Graduates in March and April, 1881—Miami, (O.) 39; Rush, (Ill.) 172; Medical College Ohio, 103; Louisville, M. C. (Ky.) 54; Nashville, (Tenn.) 53; University Pa., 110; Bellevue 117; University N.Y., 191; University, Nashville and Vanderbilt, (Tenn.) 168; Jefferson, 205; Indiana Medical College, 85; Hosp. Col. Med., (Ky.) 24; University Md., 73; Michigan College Med., 28; University Buffalo, 48; Cincinnati College Med., 30; University Louisville, 100; College Physicians and Surg., Baltimore, 154. Other numbers will be given as soon as received.——Indiana has at last a Health Law; poor indeed but better than none; the unclaimed dead by its provisions are given to the Medical Colleges.——The National Board of Health received an appropriation of $50,000, but is not allowed to use any unexpended sums on hand. This course is fatal to its development and usefulness, and is niggardly and dastardly on the part of Congress.——New York has had a mass meeting to denounce the street cleaning officials. A committee appointed went to Albany to have a law passed, giving authority, means and power for cleaning the city to the Mayor. This law passed the Senate, but a lot of dishonest and corrupt demagogues in the House sought to retain and obtain plunder by giving to Dr. Chandler, President of the New York Board of Health, the power desired for the Mayor. To the great honor of Dr. Chandler, he promptly refused to accept such a position; and now the political outlaws and rogues are at loss for some Head for this Bureau whom they can soil and use. The medical Profession could not be bought. ——Dr. W. Pepper has been inaugurated as Provost, University of Pa.; his first official act was to confer the degree of LL.D. on Mr. Garfield.——Jefferson has conferred this degree upon Dr. J. Marion Sim's—The N.Y. Academy of Medicine and the N. Y. County Medical Society are trying to obtain a law requiring a statement of contents to be placed on the label of every nostrum sold.——A "Cottage" Hospital is to be erected in Brooklyn (7th Street and 7th Avenue) as the result of a donation by Mr George L. Seney, of $200,000 in money and land valued at $70,000.——The following Medical Societies hold their meetings for this year at the following places and on the following dates: Georgia, Thomasville, April 20; South Carolina, Newberry, April 12; Alabama, Montgomery, April 12; Tennessee, Nashville, April 5; Mississippi, Winona, April 6; Kentucky, Covington, April, 5; California, San Francisco, April, 20.——H. C. Lea's Son & Co., are soon to issue a work on Obstetrics by Dr. T. Parvin, Ind.; also a treatise on Impotence and Sterility in Males, by Dr. S. W. Gross; also a Lecture on Diseases of the Nervous System, by Dr. S. Weir Mitchel; also a treatise on Electricity, by Prof. Bartholow.——The Appletons are soon to issue a work on the Applied Anatomy of the Nervous System, by Dr. Ambrose L. Ranney.——Hamilton's "Fractures and Dislocations" is being published in German, at Göttingen.——Dr. James Ruskin Bennett, of London, has just been made a knight "by her Royal Highness."——The International Medical Congress meets in London, August 3d. Sir James Paget delivers the Inaugural; Prof. Huxley an address on the "Connection of General Science and Medicine"; and Dr. J. S. Billings an address on "Medical Literature." The Lord Mayor is to give a dinner and altogether there is to be a feast of reason and roast beef, with a flow of soul and sauterne.——Prof. Huxley, now 55, says every scientist at 60, becomes an obstructionist and should be strangled; the scientific world would be better if many were strangled thirty years earlier——Old question revived: did Adam have an umbilical cord?——The Princess of Wurtemburg who repudiated all royalty to marry Dr. Wilm, of Breslau, has had her reward: she has a daughter.——What has become of the Toledo Medical Journal for 1881?——The Plague is ravaging the villages of Messopotomia and has crossed the Mediterranean.——The New Medical College in Philadelphia has issued its catalogue: "the features" of the college will be soon noted.——New York City has a Cremation Society: capital $50,000; shares $25.00 each.——French Statisticians say that to marry and have children is the secret of longevity. That Nation is suicidal, in its tendencies if this be the truth.——T. F. Smith, M.D., of Ky., reports a case of axilla lactation; a milk-gland in the right axilla.——The *Specialist* of Philadelphia is now edited by Dr. T. F. Edwards, who makes his bow and delivers his inaugural. In the language of "Rip," "may you live long and prosper." The same sentiment is offered to Dr. W. S. Whitwell the new editor of the San Francisco *Western Lancet.*——VIENNA MEDICAL FACULTY.—Professor Czerny has been elected to fill the chair left vacant by Prof. Dumreicher, and Prof. Kaposi to succeed Prof. Hebra.

* * *

EDITORIAL.

"Nullius addictus jurare in verba magistri."—HOR.

BUSINESS NOTICES.

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THE CRITICS CRITICISED. The recent determination of the Faculty of Bellevue Medical College (N. Y.,) to withdraw its increased requirements for graduation has induced the display of an inconceivable amount of drivel and injustice on the part of the medical press. One terms the Faculty "weak-kneed;" another says that its members have shown "the white feather;" another, that "New York is still a great medical centre, in spite of its medical colleges;" another that the Faculty is guilty of "cowardice;" another that in "its foresight and its honesty it is equally condemned;" another that it will receive "the contemptuous pity of its lukewarm friends, and the hoots of its rivals," etc., etc., while the subsequent criticisms amount, in force, to about so much moonshine. Such Journals and their followers fail entirely to recognize the fact, that medical college business, like all other actual business, rests on a commercial basis; not upon the futile "resolutions" of a few crack-brained enthusiasts; nor upon the maudlin sentiment of societies or associations; nor upon the dreamy philosophy of the impracticable representatives of the pen.

All of the resolutions, and sublimated theories, and stilted conceptions of moonstruck dreamers have not a feather's weight on the marketable value, or the pecuniary attainability of any known commodity; and medical education is like every other commodity; it has a market value; differing, like all other articles, according to quality, etc., but attainable like these for a price.

When a greater expenditure of money, or its equivalents, time and labor, is demanded, not by the market as a whole, but by a fragment of it, the price asked will not be given, and the buyers will go elsewhere. Now the Faculty of Bellevue, and the University of Pennsylvania, and perhaps one or two more medical institutions, attaching an undue importance to a vast deal that had been noisily written and inanely spoken in regard to medical education and its great value, unfortunately believed all that they heard and read; and at once concluded that if a greater amount of time and labor, with an increased expenditure of money, were demanded of students, that these would be promptly and fully given. They forgot or overlooked the fact, that other dealers were offering an article fully as good at a less cost in time, money, and labor, and they have found that while they failed to appreciate this, the buyers appreciated it very fully; and that these last, of course, went elsewhere to purchase. This is about the whole history of the matter and it is the whole story.

Now, what of it all? Simply that the teachers in endowed colleges who obtain their incomes from the endowment fund are independent of students and can do without them, either comparatively or completely; and that teachers in unendowed colleges are not independent of students, and must either obtain their incomes from these or close their college doors. Now this last would suit the endowed colleges, their advocates and "organs" marvellously well; but it would destroy all the good effects of competition and would be consigning medical teaching to impracticable theorists, and to the pecuniarily irresponsible advocates of a fanciful and expensive optimism. It is folly too for unendowed colleges to expect that unendowed competitors will so take care of each other, as to equally increase their rates of time, labor, and money; these competitors will take care of themselves; and if any one ever doubted this, the past winter has taught to all, with good eyes and sound brain, the whole truth in regard to it.

Endowed schools can do as they please, and they do not deserve all the praise which is so fatuously accorded to them for their increased requirements and elevated standards; for such a course gives to them greater prestige and reputation, while their income is absolutely secure, and there is no possible venture or risk. Indeed it is absolutely amusing to witness the transparent simplicity and the refreshing enthusiasm of those writers who enjoying secured incomes in endowed medical colleges berate their less favored professional brethren, and eulogize their meritorious selves. There is indeed but one drawback to this unavoidable amusement, and it is the irrepressible, persistent conviction that such writing is all after the school and morale of Pecksniff; that it is humbug, sham and pretence; and that the authors of it should be classed in the same category.

Unendowed schools if they will not and cannot agree on an equality of terms must take care of themselves.

In the sixty American Medical Colleges there are about five which are endowed and which can do as they please, being perfectly independent of students.

Of the remaining fifty-five, these are directly, demonstrably, absolutely dependent upon students. They must so act as to secure these, or they must close their doors.

Now students as a class are poor; they are seeking a prospective support, and they wish to secure this as soon as it is possible and respectable to do so It is idle to talk them about the exalted calling and the dignity of medicine, etc. It is an exalted and dignified calling, but if judged honestly, and stripped of all the drivel and nonsense written in regard to it, it is also a business. Students, will thus look upon medicine, therefore, as their teachers do, and as all men of sense and sound judgment do; as a means of livelihood and support. And they will always so act, as to secure this business and this support as soon as they respectably can. So also would the dreamers, and the addle-pated enthusiasts, and the crack-brained theorists, and the maudlin and moonshine men who write and talk to the contrary. And there is not a man who so lightly, and jestingly, and foolishly ridicules and condemns unendowed medical colleges for taking care of themselves, that would not, under similar circumstances, do exactly what he so easily ridicules and so foolishly condemns in others.

"Those jest at scars, who never felt a wound," and those ridicule Faculties who know absolutely nothing of the difficulties which they have to overcome. It is time then for every one to realize the fact that medical teaching is an actual business; that every Faculty is to be regarded as a business Firm or House; and that so long as it conducts its business openly and squarely, it is entitled to fair play and a fair field. There are some, it is true, who think that a body of scientific physicians might teach six months for glory; or for a public representation of the Quixotic ideal suggested by others; but it is easy to classify such thinkers; they belong to one of two classes; the fanatics, or the fools.

If then the theoretic projectors and inane advocates of an ideal standard, proved to be Quixotic, wish any medical college to play the classic role of the scape goat and loaded with the sins of the tribe to be sent into the wilderness to perish, why not, if failure is to be the result, advocate at once, not the recent ideal standard in American medical education, but the standard so infinitely above it, that of Germany or France?

The critics may pretend that colleges which have made an honest effort to secure an improved standard should undaunted struggle forward and perish in their failure, but if they were members of such Faculties, they would do even as these have done; and, most likely, they would do far worse. Faculties have, more than their critics, the good of the profession at heart, and the solution of the educational problem is not in abusing and distrusting them, but in coöperating with and sustaining them. The real desire for a higher standard will thus be sooner demonstrated, and the best method for securing this will be sooner manifested and more safely secured. It is easy for the critics to criticise, but is it not well to criticise the critics?

One might suppose that this was a defence, but in the first place, the Institution mentioned needs no defence, and in the next, the relations of this Journal to it are in no respect different to its relations with every American Medical College of position and character. When, however, a corporation of medical gentlemen can not change the terms upon which they are disposed to furnish a medical education and degree to those seeking these, without being maligned, and defamed, it is time for a Journal to speak plainly, not only in behalf of justice and right, but in behalf of all the principles involved in this question. There are very many Medical Journals which from antagonism of interests, and locality can not be expected to discuss this matter, and can not discuss the matter if they are expected to do so, with impartiality, fairness and independence; and it is only what was to be anticipated, when they manifest the results of those influences which spring demonstrably from rivalry, jealousy, and competition. This Journal is not among that number. It is absolutely unshackeled, and is absolutely independent. What it urges in this matter, and on all matters, is done simply in the cause of justice and right, and in support of that independence which is and should be the right of every Medical Institution.

It is true that the American Medical Association has claimed the right to manage these Institutions; and it is also true that State Medical Societies have claimed the same right; and it is further true that the Association of American Medical Colleges has essayed this right also. But there is nothing in the records to show the sense or justice of these claims; and still less is there to show that such claims have ever been successfully asserted and sustained. Each claim has proved to be as untenable "as the baseless fabric of a vision." Medical Colleges have always been managed by their Faculties; and they will always be so managed. And as long as such management is fair and open and honest, each and every college should be given an open field and a fair trial; and by their ultimate fruits only should the wisdom of their cultivation be determined.

A SUGGESTION.—The medical colleges, medical societies and associations have all failed to do anything for the improvement of medical education. How would it answer for all of the medical colleges to be invited to meet, by delegation, at any central point, and pledge themselves to require an attendance upon three full terms, as an absolute requirement for graduation; and to confine the meeting to a settlement of this single question? It being made a preliminary understanding that all colleges which decline to be governed in this matter by the decision of the majority should have their tickets and degrees repudiated by the colleges represented.

The same vote might be obtained by letter, by the association of colleges; or by any one college. There can be no doubt of the fact that all medical colleges are anxious to make this requirement, provided all of the colleges will accept it and be governed by it. As it is, there are now, and always will be, some colleges which are "anxious not to be too good for this wicked, wicked world"; and as soon as their sister colleges bind themselves to any course of action, they open their doors to all comers; like modern politicans, believing that "they should take all that they can get." Settle one requirement at a time, and then repudiate all of the bolters.

THE OLD STORIES.—Some of the journals are still busily peddling those old stock-worn prescriptions from Ellis and Bartholow, and the rest of them, and with all the pertinacity which a peddler displays in selling old-fashioned jewelry to those simple enough to buy.

Some are endeavoring to annihilate the proprietors of religious papers for publishing quack medicine advertisements; and display, it must be conceded, as much energy, and activity, and wisdom, and common sense, as did the historic bull who entered into that disastrous campaign against the locomotive.

Other some are writing up the original subject of "prescribing druggists;" and if one could only forget that he had read a hundred times what he is asked to read again, and that the druggists never read these logical and annhilating Philippics, he might possibly not find these doses as soporific as chloral or as depressing as the bromides; as it is, he can only wonder at the prodigality, the poetic fervor of such talent, and wonder still more that he invariably goes to sleep over it all.

NOT TOO MANY DOCTORS.—The old cry of there being too many doctors has been revived with increased fervor since the recent graduation of the annual 3,000 young medicos; but it is refreshing to learn that the old idea on this subject has been proved to be fallacious. The trouble is not that there are too many doctors, but that there are — two few people. The doctrines of Malthus are clearly wrong.

A HINT TO THE CONTROVERSIALISTS.—Now that the return of Spring has given rise to vernal intermittents, it so happens that many suffering from gonorrhœa manifest also symptoms of malarial poisoning. Would it not be well for some of the modern pathological nosologists to claim that there is a new specific entity to be known as "Malarial Gonorrhœa." And would it not be well to have the question of priority of discovery established by another elegant correspondence among the members of the mutual admiration society? The editor of this Journal waives all claims to the discovery mentioned, only hoping to receive more instruction, and (must it be said) more amusement from the moonstruck malarial nosologists.

MEDICAL COLLEGE PRELIMINARY EXAMINATIONS.—A western journal alleges that Bellevue Hospital Medical College has suffered confessed disaster from the stern determination of its faculty to require every applicant for admission to spell baker. A few of the most heroic perished in the attempt, and the remainder, in consternation, retired to those institutions which did not subject them to this scathing ordeal. The University and Jefferson justly determined not to be too good for this naughty, wicked world, and received all who could spell cat; either with a c or a k.

FRIEND THOS. F. RUMBOLD, editor of the *St. Louis Medical and Surgical Journal*, and author of that celebrated work, "Hygiene of Catarrh," says "that the Confessional Department, (with the significant motto, "Peccavi,") does not seem to be patronized." There are no fears on that score. American physicians are not afraid to tell the truth; *and there is much of this kind of truth which each one has to tell.* The trouble is that they are too generous to come forward first, and take the positions which they would prefer to see enjoyed by their friends.

The department of confessions of errors will, however, be enlarged. The confessions of authors will also be received and published, provided they are not too lachrymose or voluminous.

DR. ISAAC I. HAYES, (N. Y. City), of the Seventh District of New York, was entrusted, as the representative of that District, with a petition signed by 250 physicians, praying the N. Y. Legislature for relief from the pestilential condition of the streets, and for the passage of the Street Cleaning Bill. He received the petition and accepted the trust: but suppressed the one, and betrayed the other. This cowardly and corrupt traitor to the interests of his constituents and to the voice of his profession, deserves and should receive the well merited contempt of his medical brethren, and the repudiation of his political clientage.

MISS HATTIE DUELL, (Iowa City, Iowa), 52 years of age, had her voluntary fast terminated by death on the 47th day. It was a case of suicide: to obtain relief from malignant neuralgia. Dr. H. B. Aylworth (her brother-in-law), in whose house this gynæcide occurred, and all of her relatives and friends should be severely censured. Rectal or œsophageal injections could have prevented this deliberate and wanton destruction of life.

GAILLARD'S MEDICAL JOURNAL.

(*Formerly the Richmond and Louisville Medical Journal.*)

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ORIGINAL ARTICLES.

"Qui Docet Discit."

A Clinical Lecture on Cerebral Embolism. By WILLIAM A. HAMMOND, M.D. Professor of Diseases of the Mind and Nervous System in the University of the City of New York, etc., delivered to the medical class of the University, January 20th, 1881. Contributed by the Author.

Gentlemen :—The next patient I have to present to you is an interesting one in many respects, and I wish there were time to discuss fully the points of the disease from which he has suffered and which still continues its manifestations.

He is 58 years old, a farmer by occupation, a man of strong will and has enjoyed good health, except that some three years ago he suffered from rheumatism of the left shoulder and elbow, and also at the same time with great pain in the left side of his chest. These particulars I get from his son, who accompanies him, and I beg that you will bear them in mind, for they are of great importance in the clinical history of the case. Upon listening to the action of his heart I find a systolic murmur at the apex. I cannot make out that there is any regurgitation. Otherwise the heart appears to be healthy.

On the 17th of last September, while in a violent rage with a man to whom he was talking, he suddenly staggered and would have fallen but for the fact that he was partly supported by the side of the barn against which he was leaning. At the same time his head was strongly rotated to the right, a contraction of the right side of the face ensued, and he became unconscious. He was then carried into the house. Shortly afterward the rotation and facial contraction disappeared, but were followed by five fully developed epilepti-form convulsions on the right side. He then regained consciousness, and it was found that he was slightly paralyzed on the right side of the face, and that the right arm and leg were also weakened. But there was more (and this is what he comes here for today) he had entirely lost the ability to speak. He is in fact suffering from aphasia. In addition he has alexia, or inability to read, and agraphia, or inability to write. Of the existence of these two latter conditions I have satisfied myself, and as regards the other the examination I am about to make will convince you of its presence.

Q. What is your name ?

A. I cantem. I cantem. I cantem.

Q. Is your name John ?

A. No.

Q. William ?

A. No.

Q. George ?

A. I'm him. I'm him.

Q. Where do you live ?

Patient makes many gestures but says nothing.

Q. Where do you live ?

A. I cantem. I have him. I cantem.

By this he evidently means that he cannot tell me although he knows.

Q. Do you live in New York ?

A. I cantem. No.

Q. In Brooklyn ?

A. No. I cantem.

Q. In Westchester ?

A. I have him. I see him.

Q. What is this ? (holding up a penknife).

A. I cantem.

As you see he looks distrustful, evidently knowing very well what it is, but unable to recollect the name. Now let us see how far his aphasia extends. Whether in fact it is simply a forgetfulness of names, or whether in addition there is an inability to pronounce words.

Q. Is it a coat ?

A. I cantem. No.

Q. Is it a penknife ?

A. I see him. I have him.

Q. Now say knife.

Patient makes violent gestures, looks amazed, and finally says " I cantem," which as you perceive is the negative expression he generally uses, although occasionally he says " no."

These questions and answers show that the patient exhibits the two forms of aphasia. He has the *amnesic* form because he has lost the memory of words, and he has the *ataxic* because he he has lost the knowledge of coördinating the muscles concerned in articulation, so as to pronounce words. No matter what word I ask him to say outside of his limited vocabulary he is utterly unable to pronounce it.

His intelligence is fairly good, though by no means what it was before this attack, and whatever paralysis he had has disappeared. He can, as you see, move his tongue in all directions, and the grip of his hands is strong enough to make me wince when he exerts it with either one on my fingers. But there *was* paralysis and it was on the right side.

Now what has produced this state of affairs. Did he on the 17th of September have an attack of cerebral hæmorrhage or had he something else ? In my opinion he had "something else," and this something was cerebral embolism, and my reasons for this opinion are based almost entirely on the antecedent clinical history of the patient and the actual condition of his heart.

The inflammatory rheumatism he had three years ago, and his son now informs me this was repeated a year subsequently, and both attacks were accompanied by endocarditis. The lining membrane of the heart was thus rendered rough and hence was able to separate the fibrin, from the blood, just as you may separate it by beating a basin of blood with a bunch of twigs, or shaking up shot in a bottle with this fluid. The fibrin collected in little nodules over the roughened surface of the endocardium lining the substance of the heart and the valves. These are of various sizes and some hung by fragile threads of fibrin, liable to be easily detached by any cause capable of accelerating the action of the heart, or even by a smart blow on the chest. I know of a case in which a man while boxing received a blow over the heart. He staggered and fell unconscious. In a few days he died and then it was found that an embolus had been detached from the endocardium and had plugged up his left middle cerebral artery.

On the 17th of September our friend here became violently excited; his heart beat with increased force; the current of blood going in augmented velocity carried away an embolus; it rushed up through the aorta, passed the innominata and facilitated by the anatomical arrangement entered the left common carotid; the current carrent carried it by preference again into the internal carotid; then it entered the left middle cerebral lying in the fissure of Sylvius, and then it went on till its size prevented its going any farther, and then it plugged up the vessel, cutting off the supply of blood to the parts to which the branches were distributed, and backing up the blood behind it. That is the whole story. As a consequence he became partially paralyzed, loses consciousness, has several epileptiform convulsions, and is rendered aphasic. All these phenomena except the last were probably due to the congestion behind the embolus, the aphasia is the direct result of the partial cerebral anæmia produced by the induced occlusion of the blood vessel. For this vessel nourishes the "speech tract"—that part of the brain which is the speech centre, and which consists probably of the posterior and external part of the frontal lobe, the island of Reil and the anterior and interior portion of the temporo-sphenoidal lobe. Especially of those parts on the left side. That the vessel which was closed by the embolus was on the left side we know from the fact that the paralysis and convulsions were on the right side, and that the rotation of the head as it is in irritative lesions was from the injured side of the brain, and towards the paralyzed and convulsed side of the body. Thus, if this patient had not had rheumatism he would not have had endocarditis, nor even embolus. If he had not excited his circulation by his fit of anger, the embolus would not (at that time at least) have become detached. As he doubtless has other emboli on the lining membrane of his heart, it is extremely important for him to avoid for the future every cause capable of giving increase force to the heart. A very slight excitation may be sufficient to produce another attack.

In consequence of the cutting off of the supply of blood to a portion of the brain, that part undergoes softening. It dies just as your finger would if you were to tie a string around it so as to prevent the blood reaching it. If the vessel occluded is a small one, the patient may measurably recover as this one has. If it is a large one, the unconsciousness continues and the patient dies in the course of a few days comatose to the last.

In the way of treatment there is scarcely anything to do beyond keeping the patient quiet, and in severe cases well wrapped up so as to maintain his temperature at the normal standard. To dose him with bromide of potassium or other medicines is worse than useless. Stimulants may however sometimes be necessary.

Eventually he may get along pretty well if the focus of softening be not large, and soon after part of the brain may assume the functions of that which is impaired, or it is possible, notwithstanding some recent investigations, that the collated circulation may be established. However that may be, patients like this do sometimes reäcquire the ability to speak, and to that end constant practice and efforts to make them pronounce words are necessary. At the same time strychnia may be given in small doses, and phosphorus also, with the view of improving the nutrition of the brain. I shall give to this man the tenth of a grain of the phosphide of zinc and a third of a grain of the extract of nux vomica in a pill, three times a day. And I shall certainly not blister him as is often done in such cases, for I know of no blister strong enough to draw an embolus out of an artery.

Diphtheria. Its Nature and Treatment.

By A. T. BARTLETT, M. D., Virden, Ill.

The prevalence and gravity of this disease is sufficient apology for offering an article upon it; especially in the face of such a conflict of opinions; for we may assert with propriety that there is no other ailment, the etiology and nature of which are so imperfectly understood by a large and learned class of writers and practitioners as diphtheria.

One author of high repute describes it as "an acute specific general disease which runs a quick and definite course in 8 to 14 days." Another whose teachings on other subjects are hardly called in question asserts "it is manifestly a constitutional disease," that "the diphtheritic affection is the local expression of a special morbid condition of the system," and the weight of authority seems to favor the theory that this is a disease involving the general system, primarily, and that the local lesions do not constitute diphtheria: that in assuming they do, the effect, or in other words the local manifestation is mistaken for the cause, and as great an error committed as in styling certain eruptions exanthemata.

To dissent from this view does not, however, subject one to the charge of professional heresy for some of our honored lights as is well known affirm that this disease is of local origin, hence the truth of my assertion at the outset.

It would seem incomprehensible that a malady recognized from a remote period, of such common occurrance in later years, and frequently of such malignancy (one demanding the profoundest research, and at a time when investigators have such vaunted aids at their command,) should be the subject of views diametrically opposed to each other.

The treatment adopted by every thoughtful practitioner is of course in harmony with his theory as to causes, hence one assaults a real or fancied foe to human life in the form of living organisms which have chosen a position in the pharynx, confident that if he dislodges this enemy early the patient is safe; while adherents of the opposite faith, though deeming it important to use appropriate remedies for the prevention of septic products and their absorption look beyond these for the essential cause of the disease and conduct their treatment accordingly, relying mainly on tonics, alimentation and in the graver forms stimulants.

Actual practice is the test by which all theories must stand or fall, and I am forced to adopt the theory which is in consonance with that practice which has given the most satisfactory results. Years ago I was inclined to give my unqualified assent to the words of Dr. J. Lewis Smith, that "the term diphtheria or diphtheritis is applied to a blood disease," that "the first departure from the state of health doubtless occurs in the blood." While I entertained these views my success for a time in the treatment of the disease led me into the belief that if properly treated, that is by remedies addressed to the blood, it was either not attended with the danger many supposed, or the cases which fell to my care were exceedingly mild in character. The observations and experiences of more recent years have, however, convinced me that we are not warranted in saying "diphtheria must be placed in the same category with small pox, scarlet fever, measles, and other infectious diseases," but on the contrary that the air passages are primarily invaded by the cause, whatever it may be; that the constitutional disturbance is the result of this invasion or inoculation and secondarily by absorption, (unless prevented by remedies,) of poison from the parts involved primarily; though a depressed state of the system may strongly predispose to both local and general pathological conditions.

It is not my purpose to enter the domain of speculation, to quote authorities or offer conjectures as to possible poison or what particular parasite is the disturbing agent and gives rise to the phenomena of diphtheria, nor to deny that the coming microscopist will disprove the agency of parasites in the production of the disease, but the treatment based on their presumed existence as a disturbing factor is attended with most signal success.

None I believe deny that bacteria exist in diphtheritic pseudo-membrane and in the blood of the patient affected with the disease after marked constitutional symptoms present themselves, and their number appears to bear direct relation to the gravity of those symptoms. It is asserted by some that the constitutional disturbances frequently if not generally precede the manifestations of local trouble. This does not accord with my experience. On the contrary if there is no deposit, the mucous membrane is usually red and irritated, and attention is directed to the fauces or other parts before general symptoms attract notice.

I have in mind two cases that resulted fatally in which the early manifestations were not unlike those of ordinary catarrh in one involving only the Schneiderian membrane, and so slight when first observed as to cause little or no apparent indisposition. and presenting no signs for 24 or 48 hours to indicate the true nature of the malady. Some of those who entertain opposite views from those expressed here fail to discriminate between the diphtheritic membrane and the presumed organisms that give rise to it, arguing that the non-appearance of the former until after constitutional symptoms present themselves is evidence of its dependence upon this general disturbance, when we may reasonably infer that the parasite precedes the deposit, but I am not aware that any one has pretended to be able to give the time intervening between the supposed cause and the effect.

I have, however, witnessed cases, and this has been the experience of many others, where patients complained of only slight indisposition and an examination of the fauces revealed the presence of extensive diphtheritic patches and extreme fœtor.

The query suggested by these observations is may not the general disturbance which occasionally precedes the throat affection be accidental and not due to the disease?

So many learned disquisitions have appeared in support of the theory that the ever present parasites in diphtheria are the agents upon which the disease depends, that I might hesitate to reiterate these views were it not for the fact that my experience, by no means limited, but extending through repeated epidemics, fully confirms this theory, and gives me the assurance that when we attack these organisms we strike at the cause of the disease; not its effect or mere attendant, and a course of treatment based on the opinions herein expressed concerning causes, has been attended, wherever I have adapted it, with such marked success as to prompt me to write this article. I fully indorse the words of Dr. Robert Bell that "the germs of the disease become located on the surface which furnishes a favorable soil for their development and multiplication * * * —a dense fungoid growth is the result." According to the above named authority the characteristic membrane is frequently observed before there are any symptoms of constitutional involvement, and moreover the time intervening between the occurrence of local phenomena and general disturbance bears a marked relation to the constitution of the person attacked; the vigorous and otherwise healthy resisting the invasions much longer than the feeble or those laboring under depressing influences.

This view of the pathology of the disease (which so perfectly harmonises with the experiments of Prof. Tyndall concerning the diffusion of germs) being correct, early local treatment is manifestly of the utmost importance for the destruction of these organisms, as, sooner or later a poison is evolved and, as is asserted, the tissue immediately beneath the membrane becomes gangrenous—the products of destructive changes find their way into the lymphatics and finally to every part of the system.

Of the treatment Dr. Roberts Bartholow says: "many good authorities advise strong solutions of nitrate of silver." "These strong applications invite the spread of the disease to the adjacent portions of the mucous membrane by destroying the epithelium. The tendency recognizing the specific character of the malady—is to milder, or no application at all." * * * "What may be the theoretical notions, soever, in respect to topical applications, we believe that little good is ever accomplished by them, except in the case of extension of the membranous exudation to the nares." But the Dr. controverts this by the following: "In the management of the disease by the internal treatment, our attention must be directed to several points; we must prevent the diffusion of the bacterian colonies.

Sulphur in the form of powder is applied by insufflation, or blown over the whole diseased surface as far as it can be reached. A portion of the sulphur passing to sulphurous acid, acts with great efficiency on the multiplying bacteria of any fermentative process going on in diseased tissue.

Certain solvents are very serviceable—lime-water and lactic acid—carbolic acid spray is indicated."

As a rule I think the severity of constitutional symptoms bears a close relation to the extent of the membrane deposited—the bacteria, or other parasite, of course preceding the membrane which may be formed in situations where it escapes notice for a time as in the posterior nares or the larynx. While this may be the case I maintain that diphtheria and membranous croup differ essentially in their nature and required treatment, though the pseudo-membrane in the respective diseases is said by many microscopists to be identical.

No matter what is applied locally or what the mode of application the physical structure of the membrane is such that it does not disappear suddenly; and the organisms which give rise to it, being surrounded and protected as they are cannot be dislodged at once without injury to contiguous parts.

Moreover we do not know how much may depend upon the asserted truth that agents which are destructive to matured bacteria do not affect their germs, hence the development of these organisms advances to a certain point in spite of anti-parasitic treatment.

In the management of diphtheria

after the general system becomes involved, all recognize the importance of sustaining the patient and of guarding against septicæmia and as the heart and kidneys are frequently complicated, of carefully watching the effect upon these parts, but in the early stage the treatment is comparatively simple, though demanding untiring vigilance. In the selection of remedies those are to be chosen which not only destroy the parasite but tend also to neutralize its poisonous products.

As is well known a large number of remedies have been proposed on account of their local action but the one which in my estimation approaches nearest to a specific is salicylic acid. It is of course desirable to keep it in contact with the affected part as long as possible and for this reason I mix it with a small quantity of honey or syrup (glycerine would do as well) and give every two to four hours. The permanganate of potash used in the manner recommended by Rudolph Tauszky, M.D., of New York, viz.: one teaspoonful of a 10 gr. solution added to a tumbler of water, used as a gargle and swallowed in teaspoonful doses by a child twelve years of age, has given very satisfactory results; and in those unfavorable complications I, where the nares have been implicated, have applied it with good effect by means of a feather or small quill. Before I had learned the value of these two remedies—having been disappointed in many others—in my anxiety to get the full benefit of both, if they possessed any merits—I directed them in a certain instance every three or four hours alternately. The attendants not understanding the directions, gave each every hour for about twelve hours, and I never saw a case progress more favorably.

Chlorate of potash so long, a favorite remedy in this disease I do not use in the early stage except occasionally in combination with the permanganate. But after the violence of the attack is passed, or convalescence begins, it, with Tinc. of Iron, makes a useful combination.

In those cases where the disease has been located in parts not accessible to the above remedies—for instance in the larynx, trachea or bronchial tubes, I have made use of the vapor of slaking lime and seemed to get good effects, but in those cases alone do I deem it worth while to use it.

After repeated trials of carbolic acid in spray and otherwise I am convinced it cannot be relied upon, not being destructive to the bacteria and possessing no value as a local agent beyond its antiseptic properties.

Dr. Zinke of Cincinnati, Ohio, in a paper read before the Tri-State Medical Society at a recent meeting at Louisville, Ky., remarks: "as far as my observations go, I am justified in saying, that quinia in solution (gr. 5 to 60 ℥j) has a greater solvent power upon the fungi of false membrane when applied through the inhaler than any other remedy known." Dr. Z. first called the attention of the profession to the subject of these inhalations in 1877, but I am not aware that their efficacy has been confirmed by others.

A formula has been suggested containing chloral, salicylic acid, sulphite of soda and glycerine which one might suppose to be an elegant and efficient combination, but I rely on the salicylic acid alone, and in no instance has it failed in my experience to remove the false membrane when accessible to it, to remove all fœtor and promote healthy action in the parts. In many cases its beneficial local effects as antiparasitic and antiseptic are doubtless supplemented by its antipyretic action.

But little is usually required in addition to the acid, if the case is treated early, but if from any cause it progresses to a stage demanding tonics, the vital forces may be sustained by adding quinia or cinchonidia to each, or to every alternate powder of the acid, by concentrated food, and if necessary by stimulants. The patient should not be allowed to swallow any thing for half an hour after taking the medicine, but the mouth should be rinsed, as, without this precaution, the teeth may be injured.

A Case of "Skin Grafting." By W. Frank Hines, M. D., Chestertown. Md.

In several different journals recently I have seen mention of the operation of "Skin Grafting." The mode of operation and appliances being dwelt upon.

I give below an account of that operation as done by me on the eighth day of August. I was called to see a negro man, age 52 years, who had received quite an extensive injury of the hand.

He was feeding a bone crusher in a phosphate factory. The stick with which he was pushing in the pieces of bone getting caught, he attempted to pull it out, but in his effort he allowed his hand to get too close, and the tips of his fingers were drawn in, and before he could extricate them, were crushed to the metacarpo-phalangeal joint; at this juncture, he, realizing his danger, made an extra effort and succeeded in releasing his hand ; but in doing so denuded part of the wrist, the whole of the back and considerable of the palmar surface.

I describe the accident thus minutely that it may the more readily be seen how such an accident might happen.

He was placed under chloroform, the crushed parts removed, and an attempt made to make the hanging skin serve as a flap. There was considerable hæmorrhage from the capillaries, which was controlled by sponging with hot water, when he was put to bed and a dressing of carbolated oil applied. This was kept up for several days, when it was found that all the skin and other parts of which the flap was formed, had sloughed away.

Granulations had sprung up profusely, which were stimulated and fostered, particularly around the edges of the wound, by Calamine cerate. They continued to be abundant and healthy, but no disposition to heal could be noticed. Feeling pretty sure by this time, (about three weeks from receipt of injury,) that if healing took place at all, it would be imperfect and exceedingly slow; and as the articular ends of the metacarpal bones were constantly exposed, an amputation was contemplated above the wrist ; but as the thumb and index finger were intact, and knowing that they would be of great service to him if saved, a conservative plan was adopted, and skin grafting done.

In this case there was no one to watch the progress of the case and give it the care it really deserved. I did not possess a pair of curved scissors, nor several other instruments and appliances, so I was thrown somewhat on my own resources.

I took a pair of ordinary scissors and clipped a piece of skin from the arm, having first pinched it up with a pair of dressing forceps, being very careful not to draw blood. Having no one to hold it for me, I pinned it to a wooden bottom chair, scraped it well, and with a scalpel cut it in thirteen small pieces about the size of flax seed. After carefully cleaning and drying the wound, I distributed the pieces over the surface, and then enveloped the whole hand in a piece of old linen rag, well smeared with carbolized cerate. I directed his wife not to remove the dressing until I came, intending to return in about forty-eight hours. When I did go I found that the dressing had been removed in about ten or twelve hours, and with it came all the grafts but two, these had attached themselves, one about the centre of the back of the hand, the other just behind the head of the fifth metacarpal bone.

The wound was still dressed with carbolated cerate, and allowed to do the best it would, being careful to have it well washed night and morning, with warm water, added to which was sufficient carbolic acid to give it a decided odor. This was continued for about two weeks, during which time I saw him three times, then I did not see him again for ten days, and was very much pleased to find new skin forming around the edges of the grafts.

I at once repeated the operation in the same manner, putting on thirteen more pieces, of which number three took, and from these five healing went on resulting in a perfect cure.

To-day he is able to use his thumb and index finger. He is able to do such things as tie his cravat, pick up a pin, and does considerable work.

This man belonged to a class of patients who are very unfavorable subjects for surgery, added to which may be mentioned a reduced state of health from malarial troubles.

During my attendance on him I kept him on the Tinct. Ferri, Muriat, and Quinia Sulph. with such nourishment as he could get.

If I had been so situated as some of our city brothers, I should have procured the means by which the operation might have been done more skillfully, and the wound dressed in a better manner, but as that was out of the question, I used such means as were available.

Notwithstanding the fact that the antiseptic plan is being cried out against by many, and Listerism made a target against which to hurl their shafts, I am fully of the opinion that the success of this case is entirely due to the use of carbolized dressing. Antiseptic gause and oiled silk, of course, would have been better, but they not being kept in our shops, the old linen rag served the purpose when well covered with the ointment, keeping the air out.

During the four years of my practice here, I have had considerable experience in the antiseptic treatment of wounds. It has done me so many friendly turns, that I shall continue to use it, at least as long as it serves my purpose.

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ECLECTIC DEPARTMENT.

"Carpere et colligere."

Clinical Lectures on Some Points Connected with the Treatment of Wounds. By WILLIAM MACEWEN, M. D., Surgeon and Lecturer on Clinical Surgery, Glasgow Royal Infirmary.

LECTURE—THE DRAINAGE OF WOUNDS (BUTTON-SUTURES). GENTLEMEN.—In continuation of our subject, we now come to the drainage of wounds. When the arteries have all been secured, there will still be a slight oozing of blood from the tissues, which it is impossible at times to prevent, especially when large surfaces are involved. Besides this, an exudation of serum must be expected, in greater or less abundance, according to the irritation. If the edges were accurately brought together, so as to close the wound completely, the blood and serum would collect in the interior of the wound, and prevent, for the time being, the coalescence of the cut surfaces. The irritation produced by this tension would be apt to induce suppuration. In order to avoid this, provision must be made for the drainage of the wound. This must be suited to the material to be drained—blood, serum, and, possibly, pus. As far as the first two are concerned, the physical character on which their drainage depends are sufficiently alike to permit of their being considered together; while pus, though it varies much in density, must be looked on separately.

India-rubber Tubes: their Disadvantages.—The introduction of systematic drainage of wounds was due principally to Chassaignac, who effected his purpose by the use of India-rubber tubes, which still bear his name. These tubes, familiar to all of you, did excellent service, greatly facilitating the healing of wounds. There are, however, certain disadvantages connected with their use in antiseptic surgery, when the material to be drained is reduced to the minimum. They cause irritation by acting as foreign bodies, interfering with the rapid healing of the parts in their immediate vicinity; they blacken the protective plaster, showing the probability of the presence of irritating compounds; and they necessitate the dressing of the wound, in order to shorten or otherwise adjust them. These are objections which may scarcely be appreciated by those who do not practise antiseptic surgery; but, the nearer we approach perfection in the treatment of wounds, such sources of irritation will become the more prominent, and the greater will be the desire to obviate them.

Carbolised Catgut: its Disadvantages as a Drain.—Probably animated by such a desire, Mr. Chiene proposed the use of carbolised catgut as a substitute. Eight or twelve threads of carbolised catgut would effect the drainage of the wound through capillarity, and its absorbability would prevent the necessity of dressing the wound. Theoretically, this had considerable advantages; but, practically, it had objecjections. It was found that carbolized catgut, soon after introduction into the wound, swelled and softened. It became closely connected with the neighboring tissues, by virtue of its infiltrations with new cell-growth, connected with its absorption and organisation. When it was found necessary to remove it, it sometimes set up inconvenient bleeding, from the rupture of newly formed minute vessels. Its absorbability was its main advantage; but the rapidity with which this was accomplished destroyed, in great measure, its utility—as it was difficult to presage whether, in a given wound, drainage might not be required for a longer period than a few days, beyond which the carbolised catgut was useless. Its physical character precluded it from draining pus.

Horse-hair as a Drain.—Mr. White, of Nottingham, proposed, as a substitute, horse-hair, on account of its cheapness, its increased capillarity, its non-absorbability, and its non-irritating properties. As you see horsehair very frequently used as a drain, I would like to draw attention to several points which help to make the drain efficient. In purchasing horsehair, it has not been pointed out that most tails used commercially are dyed. It is all the more important to keep this in mind, as black horse-hair has been recommended. Now, most tails contain naturally a few hairs of a different color from the prevailing one.

They are therefore dyed, so as to obtain the whole hairs of a uniform black color. This pigment is to a certain extent discharged by soaking in water, and more so by steeping it in carbolised solution. Some have been seen which discharged color after the tenth washing. It has, therefore, been found better to secure a tail in a natural condition. Then thoroughly wash and boil it, to rid the hairs of any foreign matter which may be adherent to them. Next steep them in a watery carbolised solution, and dip them into a similar solution prior to insertion into the wound. The thick end of the hair ought to be inserted into the wound, in order to have the flow of the fluid in the direction in which the scales overlap.

How Capillary Drains act, and what they are suitable for draining.—The next point is to inquire how horse-hair acts as a drain, and what it is suitable for draining? A wisp of horse-hair introduced into a wound is supposed to act by capillarity. It can do so in two ways: first, by the minute spaces existing between the individual hairs forming capillary tubes; and secondly, by the flow of the fluid along the outside of the hair. In this connection, there are one or two points regarding capillarity which it is necessary to remember. First, the finer the tube the higher will the fluid rise in it; consequently, in this respect, hair will be a better capillary drain than most sizes of catgut. Second, when a capillary tube of unequal diameter, wide at one extremity and narrow at the other, is placed horizontally, fluids forming a biconcave meniscus flow from the wide toward the narrow end. The hairs ought, therefore, to be spread out in the interior of the wound, and brought together near its lips, when tubes or spaces will be formed between the hairs, having their wide ends toward the inside of the wound, and their narrow extremities at the debouchement of the drain. Third, all liquids do not rise to the same level in capillary tubes, while some are actually depressed within them. Serum and liquid blood rise within these tubes, while laudable pus does not do so to any marked extent. For blood and serum, horse-hair is an excellent drain, but for pus it is not reliable. Even for blood and serum, the entire dependence on capillarity is a questionable practice, as this force is at best a feeble one. When hair is placed in a hollow in the wound, and is cut off close to the lips of the wound, these being at a higher level than the interior, the fluid will require to mount up; it then acts feebly as a drain, even for serum and liquid blood. Of course, it may be said that drainage can be effected by making an aperture in the most dependent part of the wound, and calling in the aid of gravity—a very excellent plan, but one not always commendable for other reasons.

Capillary Syphon drains.—There is, however, a much more efficient way of using the hair as a drain; by converting the tubes found between the individual hairs into syphons. The power of the syphon is much greater than that of capillarity. The wisp of hair may be easily formed into a syphon by leaving the portion on the outside of the wound longer than that which remains in the interior. Before a syphon acts, a vacuum requires to be made, or a liquid communication established between the fluid to be drained and the long arm. This communication can easily be effected by dipping the hair into a weak carbolised solution before introducing it. The capillary action possessed by these hair-spaces also aids in establishing the flow. [Experiments, showing the superiority of the hair-drain as a syphon over its purely capillary action, were exhibited.] In order to maintain the tube-like form, a hair is tied round the outer extremity of the wisp. The outer part of the hair is placed in contact with moistened gauze, which further increases the syphon action.

Resorbent Tubes: Disadvantages.—Capillary-syphon drains being inefficient for the drainage of pus, something else is required. Tubes other than capillary answer, if suitably placed. India-rubber tubes are employed by most surgeons; and objections to their use have already been stated. Recently, Neubauer introduced what he called " resorbent tubes," which were drilled out of horse and ox bones, and then decalcified and carbolised—their object being to act as drains, and then to yield to absorption. In several cases in which they were used, they disappeared in a few days—two to five. These tubes, therefore, had one of the objections which pertained to the carbolised catgut drains, that of disappearing too soon. They acted during the period that blood and serum required to be drained, and disappeared before pus was likely to be formed. They only did the work which the capillary syphon drain could do a great deal better. Even had they been efficient, their price was such as to preclude their general application; when six were bought, they were obtained at 1s. 3d. each.

Drainage-tubes of Chicken-bone.—The principle of using a tube which would serve its purpose as a drain, and then become absorbed, was excellent, provided this could be carried out practically. What was wanted was a tube which would remain in the tissues, as a drain, for eight or ten days; and which, at the same time, would be reasonable in price. It was determined to set about finding this. Instead of being at the expense of drilling tubes out of bone, it was thought that nature might undertake the duty for us. The hollow bones of birds and some animals could be easily converted into tubes. After examining and experimenting with the tibiæ and and femora of many birds and animals, it was seen that the tibiæ and femora of the domestic fowl were the most suitable as to length and calibre. It was also found that the cooking necessary for preparing the fowl for table-use in no way impaired the value of the bone. This at once reduced the expense of the material, as an abundant supply of chicken-bones, previously regarded as refuse, could be obtained in every large hospital. The patients made their repast upon the chickens, while their tissues consumed the bones*

Preparation of Drainage-tubes of Chickeu-bone.—The method of preparation is as follows. The tibiæ and femora are scraped and steeped in hydrochloric acid and water (1 to 5), until they are soft. Their articular extremities are then snipped off with a pair of scissors; the endosteum is raised at one end, and pushed through to the other extremity, along with its contents. They are then reintroduced into a fresh solution of the same strength, until they are rendered a little more pliable and softer than what is ultimately required (as they afterwards harden a little by steeping in the carbolised solution). When thus prepared, they are placed in a solution of carbolic acid in glycerine — 1 to 10.

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*These tubes were shown to the Pathological and Clinical Society, of Glasgow, at its meeting on the 10th of Febuary, 1880, and were noted in the *British Meaical Journal* in due course.

They may be used at the end of a fortnight from the time of introduction into the glycerine solution. Holes may be drilled in them with a punch, or clipped out with scissors.

Physical Properties of Drainage-tubes of Chicken-bone.—Tubes are thus formed, having the following physical properties. They are semi-transparent, pliable, and elastic, capable of retaining for some time their form under the weight of thick flaps. The tibiæ make the longer, the femora the wider tubes. The length and width vary considerably, the longest being a little over three inches, the widest being over half an inch.

The Advantage of threadiug Drainage-tubes with Hair.—Before describing their behaviour in the tissues, it may be well to remind you that these tubes are always threaded with hair before they are introduced into fresh wounds. Any kind of drainage-tube introduced into a fresh wound is apt to become blocked with blood-clot. Surgeons have been in the habit of removing drainage-tubes, cleaning them of the clot, and reintroducing them. The reintroduction irritates the wound and at times sets up fresh bleeding. Lister, taking advantage of the shrinking of the blood-clot, left the tubes undisturbed, stating that space sufficient was left between the blood-clot and the tube to insure drainage. This has not always been found sufficient. To obviate the blocking of the tube, it is threaded with hair, which sheds the blood and serum of the first few days; after which, the hairs, being no longer of use, are removed, leaving the drainage-tube perfectly patent. If it be preferred, part may be removed at the first, and part at a subsequent dressing. In the case of the chicken-bone drain, the hair helps to maintain the calibre of the tube during the first few days, especially where the dressings might exercise pressure. The action of the hair as a capillary syphon is in no way impaired, but rather improved, by being introduced into the tube.

Duration of Chicken-bone Tubes in the Tissues.—Out of one hundred carefully recorded observations, the average duration of the chicken-bone tubes was something over eight days.

Chromicised Chicken-bone Tubes.—If the surgeon would like a decalcified tube which would resist the action of the tissues for a longer period, he can secure this by steeping the chicken-bone tubes in a chromicised, instead of a carbolised, solution. Some such have resisted the action of the tissues from a fortnight to about three weeks. These chromicised tubes are, however, seldom used, because our fresh wounds rarely require drainage for so long a period.

Are these Decalcified Chicken-bone Tubes absorbed by the tissues?—Some surgeons seem to believe that these tubes are not absorbed, but that they are simply dissolved, as they would be were they immersed in a quantity of blood-serum or pus, kept at the temperature of the human body. That this is not so, the following facts will show. The tubes do not disappear, except when in contact with living tissue in a wound in the soft parts. When they are placed in the midst of a slough, they soften; but there the action ceases—they do not erode. Tubes have been placed in osseous cavities not lined with granulations, from which putrid necrosed bone have been removed. There they have remained for weeks bathed in pus, which emanated from the neighboring tissues, and they have undergone no other change than that of softening. On one occasion, a tube was placed in a collection of serum resulting from an injury over the muscles of the back. The cavity containing the serum filled rapidly after being emptied, so that the tube was only in contact with the living tissues for a very small part near the skin. This small part was eroded, while the remainder, steeped in the serum, was only softened at the termination of the tenth day. A puncture was then made in the most dependent part of the sac, the drainage supplied being so free as to permit the coalescence of the sides of the cavity, when the tube, which had not hitherto undergone absorption, became absorbed in four days. In another case, there was a slight depression in the limb of a patient, at the bottom of which a granulating surface existed, which discharged pus. On this granulating surface, a small portion of drainage-tube was laid. It was found that the tube was covered with pus after the lapse of six days. The tube generally was softened; but the only part which was eroded was that which lay on the granulating surface. These illustrations are sufficient to show that these tubes do not disappear by the chemical action of the secretions, kept at the temperature of the human body; but that they must be placed in contact with living tissue before they disappear, the leucocytes absorbing them.

In order to aid the observations of the behaviour of carbolised chicken-bones while in contact with the tissues a small part of the tube was made to project beyond the lips of the wound. By-and-bye, this projecting portion was eaten through, and dropped off; while the tissue closed over and absorbed the remainder. Tubes have been inserted into abcesses from which the pus has been thoroughly evacuated. When next looked at, fourteen days later, the portions of the tubes which project from the wound were found detached, lying in the former opening; while a white ring, enclosed in granulation-tissue, marked the seat of the decalcified bone; and, finally, the epithelium covered both from sight. As a rule, however, especially when the tubes were originally threaded, with hair, their calibre generally diminished, from pressure on their walls and from the penetration and coalescence of the tissues through the apertures made in them; so that the decalcified tubes, having served their purpose, were slowly removed by molecular activity. The tissues have in this way, so far, the control of their drainage. The greater the normal molecular activity, the more quickly will the wound heal, and the more quickly will these tubes be absorbed; the weaker the vitality, the longer will the healing process take, and the longer will the drainage-tube remain.

Button and other Sutures.—Regarding button-sutures, you are aware of the various kinds already in use. The objection to these is, that they have one aperture in the centre, through which a wire is drawn, and which is then fixed to a catch on one or other side of the button, thereby tending to tilt the button sideways, and so bruise the tissue with its border. This can be obviated by using the button which I show you, and which is in constant use in my wards. It has a couple of apertures, placed very near to one another in the centre, and a double thread is brought through these apertures and tied—so that the pressure comes from the centre of the button, and the wires or threads may be tightened or relaxed without tilting the edge. They are easily adjusted. They can be made in a few seconds by using a sharp-pointed pair of scissors. Lead has generally been used for buttons, on account of its pliability. Block-tin may be had sufficiently pliable, and it is free from the production of black deposits, to which the lead gives rise. Chromicised catgut may be used with these buttons, one end of the double thread being tied into a loop— so that it may be opened to permit tightening or relaxation, as the case may require. It becomes softened and absorbed when the buttons become loose. The edges of the wound are generally brought together by several deep sutures of chromicised gut, with a number of stitches of carbolised gut between; the latter absorbing in a few days, the former about the end of a fortnight.

Conclusion.—In conclusion, gentlemen, you will perceive that our aim is to place in wounds substances which, while effecting the purpose for which they were introduced, will yet produce no irritation, and will permit themselves to be absorbed in due course; so that, once having dressed a wound, we may not be forced to open the dressings for the purpose of readjusting the material employed. We aim at being able, after an operation, to judge of the character of the wound; make provision for its probable wants; and, while the patient is yet under the influence of the anæsthetic, apply a dressing which will remain untouched until the wound is healed, or, at least, well on its way towards being healed. By this means, the healing will take place more rapidly, and the patient will be relieved of much annoyance and pain. An accurately recorded rectal temperature will be a sufficient index of the constitutional condition of the patient; while a watchful eye on the dressings, to insure that discharge does not penetrate them, will secure the safety of the wound. If there should happen to be a discharge of blood during the first forty-eight hours, sufficient to stain the external dressing, the dressings are reapplied; and the opportunity is taken of removing the hairs from the tubes—unless chromicised catgut be used as a substitute. If there be no such discharge, the dressings are left on till the end of the first week; they are then opened, the wound inspected, the hairs removed, and the dressings reapplied. At the end of a fortnight, the wound is looked at for the second time; and, as a rule (in fresh wounds), it is found healed. You see excellent examples of this in the two excisions of the mammæ, in which the whole axilla had to be cleared out; and, in one of them, a large portion of the pectoral muscles had to be removed, as they were infiltrated with caseous deposits. These were looked at for the first time a week after the operation, and found almost quite united; the hair was withdrawn, and the dressings reapplied. At the end of a fortnight, they were looked at a second time, found firmly united, and the drainage-tubes absorbed. Again: in that Carden's amputation in 29 Ward, the same thing has happened; it was all but healed at the end of a week, and firm at the end of a fortnight. There was not a drop of pus from any of them.—*Brit. Med. Journal.*

On Gastrostomy. With Two Successful Cases, one for Cicatricial and the other for Cancerous Stricture.[*]

By THOMAS BRYANT, member of the Council and Fellow of the Royal College of Surgeons, Surgeon to and Lecturer on Surgery at Guy's Hospital.

The case to which I draw attention is one upon which I performed the operation of gastrostomy on August 3rd, 1880, for cicatricial strricture of the œsophagus. The patient was a girl, aged twenty-two, named Lydia C——, admitted into Guy's Hospital under my care on July 15th, 1880. It seemed from her history that she had been healthy and steady up to January, when from some domestic trouble she, with suicidal intentions, took half a wine-glassful of sulphuric acid. Medical advice was at once obtained, and an emetic was said to have been given, and after the lapse of a certain number of weeks the soreness of her mouth and pharynx disappeared. Difficulty of deglutition, however, was soon experienced, and steadily became worse, so that for some weeks before admission she had lived entirely on liquids, and these were swallowed with great difficulty. Indeed, it took her almost an hour to swallow half a pint of milk.

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[*] Read at the Harveian Society, March 17th, 1881.

When the patient came under my observation she was pale, emaciated, and feeble, and although I made many attempts to pass a bougie or catheter down the œsophagus I never succeeded, the instrument invariably being stopped at the upper orifice of the œsophagus, behind the cricoid cartilage. Under these circumstances I determined to open the stomach, and operated on August 3rd. The operation was performed with the patient under the influence of the anæsthetic mixture and under the carbolic spray. It was commenced by an incision three inches long, running obliquely below the margins of the left ribs, and the skin and muscles were consecutively divided down to the peritoneum; all bleeding vessels were twisted, and capillary oozing arrested by a hot sponge. The peritoneum was then divided, and the left lobe of the liver, which became visible, was pressed upwards. The stomach was then readily found, and brought well forward to the surface of the wound. Great care was observed to keep the parts well sponged, to guard against anything passing into the peritoneal cavity. Two loops of fine carbolised silk were then introduced through the peritoneal covering of the stomach, about a third of an inch apart, and with these and a pair of tenaculum-pointed forceps the stomach was kept *in situ*. The ends of the loops were left long. The stomach was next carefully fastened by a series of interrupted sutures to the margins of the skin around. The sutures merely included on the one hand the peritoneal covering of the stomach, and on the other neither included the parietal peritoneum nor the divided muscles, but the skin alone. The stomach at this stage of the operation was not opened. During the next five days the patient was fed by nutrient enemata every three or four hours, and enough morphia was administered subcutaneously to give rest. The wound was covered with lint saturated with terebene and oil. No sickness, elevation of temperature, pain, or other trouble followed the operation, and on the sixth day the stomach was opened. The opening made was very small, not more than the eighth of an inch long. It was made by elevating the stomach by means of the two loops which had been introduced through the peritoneal covering of the stomach at the first stage of the operation where the ends had been left long, and cutting with a narrow tenotomy knife from loop to loop. The loops were then removed. The patient did not feel this part of the operation.

An India-rubber tube, with its end cut obliquely, was then introduced into the stomach through the small orifice, which is dilated, and some milk was poured into the stomach through a funnel. After this the patient was fed regularly through the artificial gastric orifice, and the case went on in all ways well. The girl in three months had gained 19 lb., or about a pound and a half a week. For some weeks after the operation she was fed upon minced meat and pancreas made into a pulp, and this thick food was readily passed into the stomach by means of a simple apparatus, which may be described as a small valveless Higginson's syringe, with one tube fitted with a funnel for the introduction of the food, and the other cut obliquely to facilitate its introduction into the stomach through the artificial orifice, the patient with her finger and thumb so nipping alternately the respective ends of the tube when the syringe is compressed as to prevent regurgitation.

I should say that this apparatus, which was made by my dresser, Mr. Studer, enables a patient to be fed on thick instead of liquid food. The patient has been able to take fluids by the mouth since the operation, and to swallow small crumbs of bread or sponge-cake, but I have not yet been able to pass any tube into or through the stricture. It is to be noticed that there has not been under any circumstances the smallest escape of the stomach's contents through the artificial opening, and this is demonstrated by the healthy aspect of the orifice and of the parts around. This happy result is doubtless due to the smallness of the orifice which I made, and the elasticity of the walls of the stomach; the artificial opening yielding readily to the introduction of the obliquely cut end of the tube, and closing on its removal by its own elasticity.

The advantages of this condition are obvious; the patient is saved the annoyance necessarily appertaining to the escape of the stomach's contents, as well as the local distress and irritation which the escape of gastric juice always causes. She is, moreover, able to take her meals standing or sitting with little trouble and without inconvenience; indeed, with all truth, it may be said that the patient is now, eight months after the operation, in the enjoyment of excellent health, and with the exception of the loss of some, though not all, of the pleasures of the table, there is nothing in her condition either to shorten life or to render it less valuable.

Remarks.—The operation of gastrostomy is applicable to two chief classes of cases—to those of stricture or obstruction of the œsophagus from cancer, and to those of cicatricial stricture. In the former class the operation is not curative, but palliative; it is undertaken mainly with the view of prolonging life, and secondarily as a means of diminishing the agonies of a death from starvation. In the latter class it is undertaken with the view of saving life. In the former class consequently the results of past experience are neither over-brilliant nor encouraging, since out of thirty cases tabulated by M. Verneuil up to 1879 twenty-two sank within the first week, and two alone survived the operation a month. One, however, was then living five months after the operation. It is to be remembered, however, that up to the present time the operation has almost always been postponed too long—that is, it has been only entertained when the patient was literally at death's door, and undertaken with the view of palliating the tortues of a death from starvation, and under these circumstances it is not to be expected that grand successes should be recorded.

Were the operation undertaken earlier, better results would be obtained; and I have the records of an unpublished case of my own before me, which shall be appended to this paper, in which the patient survived the operation more than eight weeks; and my colleague, Mr. Howse, tells me that four cases upon which he has operated lived from five weeks to seven months. If, however, the operation were undertaken, as I hold it should be, as soon as the diagnosis of the case is made, and as soon as the obstruction is marked enough to prevent the deglutition of solid food, better results would be obtained; for by such a practice the patient would be in a better condition to undergo the ordeal, the stomach would be less atrophied, and consequently a better organ to deal with; the miseries of hunger would be guarded against, for they would be anticipated; and above all, the progress of the cancerous disease in the œsophagus would be rendered less rapid, and its disintegrating changes would be postponed, in the same way as surgeons now know by the operation of colotomy cancerous stricture of the rectum is relieved, and the changes in the cancerous growth are retarded if not prevented.

In the second class of cases where the operation had been undertaken for cicatricial stricture better results are to be told, for Verneuil's case lived seventeen months and died of some unknown disease. Trendlenberg's case was living three years after the operation. My colleague, Mr. Howse, had a case two years ago which still lives, and the present case promises to demonstrate still better the value of the operation, for the patient is not troubled, as all the others have been, by the escape of the contents of the stomach from the artificial orifice and the consequent local soreness and irritation which such an escape entails. And this leads me to make a few remarks on the operation itself. . The incision I made, and believe to be the best, is an oblique one about three inches long and half an inch below the borders of the left ribs. The tissues should be divided carefully down to the peritoneum. and everything like bleeding should be stopped before the peritoneum is opened. The stomach as soon as caught should be brought well forward into the wound and held with a pair of tenaculum-pointed forceps; two loops of carbolised silk should then be introduced, about half an inch apart, through the peritoneal covering of the stomach and its subserous tissue, to indicate the spot at which, on some future day the artificial opening is to be made. The stomach is then to be carefully stitched to both edges of the skin wound by a number of fine stitches passed through its serous covering alone, in the same way that Nélaton suggested in the operation of enterotomy for abdominal obstruction. There does not seem to be any necessity to include in these stomach sutures the divided parietal layer of peritoneum, the edges of which naturally fall against the wall of the stomach, which is well brought forward. The patient is then to be left alone, and fed by nutrient enemata, to allow the stomach rest and time to unite with the abdominal wound, and after the lapse of from three to five or six days, according to the necessities of the case, the stomach should be opened. In this case I completed the operation of opening the stomach on the sixth day. The full credit of this suggestion is due to my colleague, Mr. Howse, and I have adopted the practice in two cases after witnessing its benefit in several instances. I believe this method of operating has great advantages and tends to make the operation safer. The opening into the stomach should be very small; in the present instance it was no larger than the width of a tenotomy knife, and yet experience has proved that such an opening is elastic enough to allow the easy introduction of a tube equal to three-eighths of an inch in diameter, and to prevent the regurgitation of even a drop of liquid from the stomach. The stomach having been opened the patient was fed at once, for the first few days with milk, eggs, and beef-tea, but later with beef and pancreas minced and cooked by a simmering process till the whole was almost liquefied. At first a tube and funnel was used, but later on the thick food was more readily introduced by a simple apparatus [shown and described.] The girl can now take liquids by the mouth, and a little solid. Still no tube can be passed or opening formed into which any probe can be passed. Under such circumstances there is but little prospect of her doing without artificial feeding.

By way of conclusion let me urge upon my medical friends to suggest a resort to gastrostomy in cancerous obstruction of the œsophagus so soon as the diagnosis is made, and there is practical difficulty in the deglutition of solid food, for by an early operation many more lives would be prolonged, and much misery saved. The progress of the disease, moreover, would be greatly retarded. Whilst in a cicatricial stricture the operation should be resorted to only when all hope of the stricture being dilated has vanished, and there is no other alternative.—*Ibid.*

Cancer of Œsophagus; Gastrostomy; death two months after operation from extension of the disease to the trachea, lungs, liver, and mediastinal glands.

(Reported by Mr. HIND.)

J. B.——, aged sixty-one, a labourer, was admited into Stephen ward on Feb. 25th, 1880, under Dr. Wilks' care. Patient has enjoyed good health; never drank much. Has had gonorrhœa, but not syphilis. Ten months before, patient first noticed dificulty in swallowing solid food. It appeared to stick in the œsophagus on about a line with the upper end of the sternum. He subsequently was unable to swallow his food, and vomited it immediately. His appetite has remained good. He has not suffered much pain. On admission he has apparently lost much flesh; his skin is hot and dry. He has a circumscribed fluctuating tumour situated over the inner half of left clavicle, not infiltrating the skin; it is not painful, and the patient had never noticed it. A few small glands are enlarged at the lower part of the posterior triangle of the neck. About a fortnight ago an abscess formed on the dorsum of the left foot, which is very red and inflamed. Tongue moist, furred, and white. Teeth not good, only two left in the upper jaw. Bowels open.

Feb. 26th.—House-physician passed a bougie down the œsophagus, but it did not pass lower than on a level with the upper part of the sternum. To take one ounce of brandy three times a day, with eggs.—March 2nd: The tumour is 3″ long by 1¼″ deep; feels elastic and soft, and at anterior end is soft and fluctuating. Deficient entry of air all over the chest; chest expands tolerably; no dulness; no signs of invasion of thorax by growth; breathing hoarse all over the chest. The house-physician passed a large then a small bougie, both to about 4¼″ below epiglottis, corresponding to a point immediately above the sternum. — 6th: Fluctuation of swelling; opened by Mr. Bryant, and four ounces of pus came away.—10th: One ounce of brandy to two ounces of milk as an enema.—11th: Mr. Bryant performed first part of operation of gastrostomy, as described in last case. The wound healed kindly without any peritoneal or other complications.—16th: Operation completed; opening into the stomach a small one.—17th: Temperature normal; fed every two hours with four ounces of milk and an egg, and half an ounce of brandy occasionally.—18th: Injection every four hours; temperature normal; bowels open; tongue fairly clean.—19th: Absesses on foot opened.—22nd: Temperature normal; fed six times a day, two of which consist of milk and eggs, the remainder of meat; about four or five ounces of brandy; weighed 98 lb.—23rd: Leg put on back splint.—25th: Up in a chair in ward.—27th: Fed four times a day.—April 21st: Weighed 103 lb.—May 5th: Cough troublesome; weaker.—10th: Died.

Necropsy by Dr. HILTON FAGGE.—Body much emaciated. A slight sore on one instep, and in the abdominal wall was a fistula to the left of the umbilicus from the operation of gastrostomy. The opening was in the centre of a small amount of scar tissue. It was the size of a number 10 catheter, and above—that is, the upper margin had upon it an overhanging lip, which looked more like mucous membrane than skin or scar. The cranial bones were normal; no thickening. Dura mater and sinuses, arachnoid and pia mater, were normal. Arteries of head very atheromatous at base. The brain weighed 50 oz. In the head of the outer nucleus of lenticular ganglion upon the right side there was a small-sized cyst of an old apoplexy; its colour was brownish, and its lining membrane smooth, and in its walls were some small vessels. The smaller vessels in the interior of the brain did not look so very thick.—Spine: The spinal vertebræ had various nodosities upon their anterior margins at the line of junction with the intervertebral substances in the lumbar and dorsal regions. — Respiratory organs: Recent lymph over hinder part of left pleura. Both had in various parts, particularly over the hinder part of the lower lobe and in the outer part of the upper lobe, a considerable infection of the lymphatics with cancer. They stood out on the surface as interlacing lines of milk white or yellow colour, forming a rectangular latticework. There were, in addition, in some parts, flat plates of growth spreading in the pleura from these. The lungs felt very solid towards the root. On section they were seamed in various parts by thin lines of cancerously infiltrated septa. These had a head in appearance in various parts, and in the centre of the lung this condition was surrounded by a granular pneumonic lung, which it was difficult to say was not pneumonia. It may have been pneumonia mixed with growth. The heart weighed eight ounces and a half, and was quite healthy. The œsophagus was tightly strictured opposite the second ring of the trachea. There was very little thickening of its coats, but on slitting up the tube there was a jagged white growth in the mucous membrane, without any well-defined margin, and, in addition, a superficial ulcer in the mucous membrane, which ran up vertically in the covering of the thyroid and cricoid cartilage to the left side for more than an inch. The floor of this ulcer presented no cancerous attributes, but the edge of the ulcer was distinctly raised and everted with a soft fleshy growth. The trachea was not perforated, but its wall was extensively implicated. On looking at the mucous surface of the trachea the whole of it, down to the bifurcation, looked mottled and thick, and glandular-looking tubercles of growth studding it all down, and from these parts the disease had invaded the external parts. The thyroid body was extensively infiltrated with a similar growth. The glands were affected, but they were not much enlarged. The actual stricture of the œsophagus was not more than half an inch in length. Above and below the parts were normal.—The liver contained three or four small circular, firm, cancerous nodules ; in other respects the liver was healthy.—The intestine was in a very interesting condition. Throughout the whole length of the small intestines, but chiefly in the lower part, were ulcers which had rather thick edges, which tended to run round the bowel, and which exposed clearly in the floor the muscular fibres of the bowel. One of these had gone deeper, and by a second ulceration in the already ulcerated surface had all but perforated by a transverse slit, two-thirds of an inch long. The ulcers externally had a puckered aspect, but their was no material narrowing of the bowel, and one at least had very minute white grain-like bodies (tubercles ?) in the subperitoneal tissue. I think it was an early tubercular affection of the lymphatics in the floor of a chronic ulcer. Near the cæcal valve the ulcers became more irregular and more superficial—not like any particular ulcer—and similar small superficial circular and oval ulcers ran down in the large intestine for some distance. But there was one additional peculiarity in the large bowel. The mucous membrane was smoother than usual, and sanded over with multitudes of small rough-looking grains, distinctly projecting from the surface. I hesitated to pronounce an opinion on its nature. They were two prominent, and abruptly so, for solitary glands. No lardaceous disease of liver or intestine.—Spleen : the capsule was thick. The suprarenal capsules were healthy.—The kidneys weighed eight and a half ounces. One kidney was very good. The other contained many cysts of small size, but its cortical structure was good.—Most of the joints showed osteoarthritic changes. The toes were nodular at their edges. The knees had a large part of their surface from centre outwards devoid of cartilage, and eburnated ; while at the margin of the cartilage there came a nodose edge of bone. The elbows were in a similar state. The synovial membrane in knees could hardly be said to be vascular. The shoulders were also affected, the left bicipital groove being markedly prominent from new matter under the muscular attachment of outer lip.—With regard to the ulceration of the intestine, I was in doubt as to its nature. The ulcer in some parts certainly involved part of Peyer's patches, and further they were well-defined, clean looking ulcers, exposing the muscular coat without any granulations—in this resembling typhoid ulcers which had sloughed out, and not tubercular ulcers. On the other hand, the peritoneal aspect was in no other places in favour of tubercle. The stomach at the seat of operation was firmly united to the skin. No signs of peritonitis were present.—*Ibid.*

Diphtheria.—Something New.

The pathological relations of diphtheria and the discovery of a micrococcal organism in the false membrane have made it almost certain that the morbid poison which gives rise to the disease is a parasitic organism. The observations to which we lately called attention that bacilli were to be found during life in the urine of patients suffering from the disease, and after death in the kidneys, constitute another step in the demonstration. From a communication to the Paris Société Anatomique we learn that a French "interne," M. Talamon, has succeeded in cultivating the organisms from eight cases. In the condition of complete development they presented a characteristic mycelium and spores. The former are tubes with partitions, at intervals, from two to five thousandths of a millimetre in length. These, under favorable circumstances, elongate and bifurcate, the bifurcations being characteristic in consequence of their incurved branches, like the sides of a lyre. In other conditions the mycelia do not become elongated, although they multiply so rapidly as to cover the surface of the cultivation liquid; they remain short and assume irregular forms, and give rise to numerous straight rods. The spores are of two kinds, round or oval, which may be termed the spores of germination, and rectangular spores or conidia. The latter characterise the species. They form small rectangles of various sizes, their length being sometimes fifteen thousandths of a millimetre. They may be isolated or united in festoons or zigzag chains. At first homogeneous, they soon become filled with small round granules, highly refracting, and of the size of ordinary micrococci. The round or oval spores are those which, by their elongation, constitute the mycelium. They appear as clear points, from three to five thousandths of a millimetre in diameter, in the middle of a mass of granular material. M. Talamon has inoculated this organism into the mucous membrane of the mouth or nose, or has given it with the food, in six rabbits, two guinea-pigs, four frogs, a fowl, and four pigeons. The rabbits died at the end of six, eight, ten, and eighteen days. That which died soonest presented an enormous swelling of the neck resembling the œdema of the neck in diphtheria, and due to a serous infiltration of the connective tissue, and the culture of this serosity showed the same organism with the characteristic conidia. The rabbit which died at the end of the eighteen days presented a bilateral fibrinous pleurisy, with effusion. The effusion and pleuritic membrane also yielded, on culture, the organism which has been inoculated; and it could be recognized, either by simple microscopical examination or by culture, in most cases in the liquid contained in the pericardial and peritoneal cavities, and often in the kidneys. The organism was never obtained by cultivation of the blood contained in the heart. The liquid either remained clear or presented only ordinary bacteria. In the four pigeons M. Talamon succeeded in producing characteristic false membranes. He first scratched the mucous membrane of the mouth with a bistoury, and then placed some of the cultivated organism in the interior of the mouth. At the end of twenty-four hours a thick membrane lined both sides of the mouth, the tongue, the false palate, and the back of the pharynx. It was yellowish-white in color, and was formed, like the diphtheritic membrane in man, by epithelial cells, fat, micrococci, and bacteria. There were very few of the rectangular conidia, but these were abundantly obtained from the membrane by cultivation. Two of the pigeons died at the end of the three days. In one the entrance to the larynx was covered by false membranes, and the trachea was full of a thick mucus from which the organism was obtained by cultivation, as also from the pericardial and peritoneal liquids, but not from the blood. The third pigeon remained ill for eight days, and then the false membranes become separated and the animal recovered. At this point, unfortunately, the experiments had been for the present arrested. They were carried on in the laboratory of the Hotel Dieu, and some of the physicians, fearing lest some of the organisms might contaminate their patients, stopped the observations. We were promised a resumption of the inquiry at an early period. The facts ascertained are of the greatest importance, and seem to open out an entirely new field of investigation as to the etiology of the disease, since M. Talamon hints that he possesses a clue as to the source from which the organism is derived in the case of human infection.

Abstract of a Clinical Lecture on Sore-Throat. Delivered in University College Hospital. By Christopher Heath, F. R. C. S., Holme Professor of Clinical Surgery.

Tonsillitis, or acute inflammation of the tonsils, commonly results from exposure to cold, in the case of delicate young people who have susceptible throats. Towards evening, the throat feels swollen and painful, and both speech and deglutition becomes difficult, the voice having a peculiar thick tone, which is very characteristic. On inspection, the fauces will be seen deeply injected, and the tonsils swollen and bulged, both towards the median line and between the anterior pillars of the fauces. There is great tenderness in the submaxillary region and behind the jaw, and occasionally acute pain in the ear from extension of inflammation along the Eustachian tube. There is considerable general fever, the temperature rising two or three degrees, and the tongue being coated with a white fur; but the pulse, though rapid, has little force, and is very compressible. In from twelve to twenty-four hours, and either with or without a rigor, matter forms in one or, seldom, both tonsils; and, if not relieved, gives rise to great distress from the embarrassment caused to the breathing, the patient sitting up in bed, and constantly hawking up viscid mucus, until at last, in some straining effort, the abscess bursts, and immediate relief with rapid convalescence follows.

In the premonitory or early stages, a mustard emetic often acts as a charm, and produces immediate resolution; but, failing this, recourse may be had to warm inhalations, the application of hot poultices below the ears, and the administration of belladonna internally in small and frequent doses, coupled with plenty of liquid food. An early puncture of an inflamed tonsil is much to be recommended, if the surgeon will use a bistoury, covered except for a quarter of an inch from the point, and thrust it boldly through the soft palate, where it is made prominent by the tonsil. The hæmorrhage should be en-encouraged by gargling with hot milk and water, and will give much greater relief than the application of leeches externally. The same method should be adopted in opening an abscess in the tonsil, and thus all risk of doing damage to important structures will be avoided.

A more chronic form of tonsillitis is familiar to residents in hospitals under the name of "hospital sore throat," and is met with among persons exposed to bad air, particularly if tainted with sewer-gas. It consists in a subacute inflammation of the tonsils with injection of the fauces, sometimes going on to abscess, but more frequently subsiding, if the patient be put upon a stimulant and tonic plan of treatment, and removed from the depressing influences to which he has been exposed. The occurrence of frequent sore-throats in a household should direct immediate attention to the condition of the drainage, and the probable escape of sewer-gases into the house.

Acute inflammation of the pharynx may occur in conjunction with tonsillitis or alone, and the great symptom is the difficulty in swallowing. The disease ends ordinarily in resolution, but may occasionally lead to suppuration in the cellular tissue behind the gullet, thus causing a post-pharyngeal abscess. The bulging forward of the posterior wall of the pharynx by an elastic swelling, which impedes deglutition and may interfere with respiration, clearly marks the case, and a puncture in the median line will readily evacuate the pus. It should not be forgotten that post-pharyngeal abscess is often connected with caries of the cervical vertebræ.

Erysipelas occasionally attacks the fauces and pharynx, and appears to lead to complete temporary paralysis of the muscles, so that not only is deglutition impossible, but it is equally impossible to excite reflex action in them by irritating the throat mechanically. The affection is a very serious one, and likely to prove rapidly fatal from depression of the vital powers, both by the poison and the want of food, unless ample nourishment be administered by the rectum until the power of swallowing is restored.

A much more chronic form of paralysis of the throat is that following diphtheria, but here it is the palate which is principally affected, the voice being thick for weeks.

Hypertrophy of the tonsils is common in children and young persons of a strumous diathesis, and, in rachitic patients, is apt to lead to the deformity known as "pigeon-breast," from interference with the full expansion of the lungs. The thick speech, open mouth, and stertorous breathing, which in sleep developes into sonorous snoring, are sufficiently marked in extreme cases; whilst, in milder cases, the constant tendency to sore-throat, and the general failure of health and strength without obvious cause, should direct attention to the tonsils. On inspection, the tonsils will be seen as large, white, glistening masses, often meeting in the middle line, and presenting yellow spots due to inspissated mucous secretion. Hypertrophied tonsils may project into and down the pharynx, but can never reach up to and obstruct the Eustachian tubes; the deafness so commonly found in these cases being due to the generally congested condition of the mucous membrane, which is relieved by the removal of the glands.

The application of local styptics in the form of a solution of nitrate of silver, (gr. 10 to ℥j), or the glycerine of tannin; the use of catechu or krameria lozenges, or the employment of a spray of sulphate of zinc (gr. 10 to ℥j), are all useful in slight cases, by keeping the disease in check while the patient's health is improved by sea air and tonics. In severe cases, removal is the best remedy, and is much less painful and infinitely more satisfactory than drilling the tonsil with a sharp stick of nitrate of silver or caustic potash, as has been recommended.

The simplest form of guillotine, used with a pair of vulsellum-forceps, by which the tonsils can be drawn thoroughly into the ring with the opposite hand, is preferrable to the complicated guillotines fitted with a fork, which are apt to get out of order, and require considerable practice for their successful employment. The patient being seated in a good light, with the head thrown back, and the hands held by assistants, the guillotine can be slipped into the mouth, which it immediately gags; the forceps then grasping the tonsil through the ring of the guillotine, draws it well forward, and a sharp movement of the thumb drives home the blade of the guillotine, and cuts it off. Without withdrawing the guillotine, it is turned round, and the other tonsil similarly treated by changing hands, before the little patient has really time to cry. It is quite sufficient to remove a large portion of a tonsil, and any attempt to remove the whole is likely to be followed by sharp bleeding. Ordinarily, the sucking of ice for a few moments staunches all bleeding; but if not, the bleeding surface, and that only, should be painted with liquor ferri pernitratis.

After removal of the tonsils, ice may be sucked for a few hours, and a warm poultice under the jaw gives great comfort. Care should be taken to give food cool enough to be easily swallowed, and for a few days anything hard, such as crust, should be avoided.

Hypertrophy of the uvula may be met with in the same class of patients as the hypertrophied tonsil, the whole uvula being swollen from over-development of the adenoid tissue contained in it. This must not be confounded with the œdematous uvula, due to inflammation, and commonly found in any acute inflammation of the throat. A more common form is the elongated uvula found in persons of relaxed habit, who suffer from irritable throat and constant cough, the result of the irritation of the fauces by the uvula. Astringent gargles may be usefully employed in such cases, but, if obstinate, they should be treated like the chronic hypertrophy—by abscission. This little operation may be performed with the tonsil-guillotine, or more simply with scissors, which must be very sharp at the edge, but blunt at the points. The uvula should be caught with a pair of hooked forceps, to prevent its being swallowed, and will be found thicker on section than might have been anticipated.

Ulceration of the tonsils of a superficial character is common in inflammatory affections of the throat, and the ulcers are often covered with aphthous patches in patients whose vitality is low. The deep excavated ulcer of the tonsils, nearly circular in shape, and covered with a thin grey slough, is symptomatic of secondary syphilis, and will only yield to constitutional treatment.

Irregular excavated ulcers presenting a yellow slough, seen upon the uvula and soft palate, or on the posterior wall of the pharynx, are almost always due to tertiary or inherited syphilis, and will heal rapidly under the administration of iodide of potassium in full doses.

As the result of this form of ulceration, adhesions of the soft palate to the pharynx, with narrowing of the pharynx and nasal intonation, owing to the shutting off of the nose, are ocasionally met with. Any interference with the cicatrices is to be avoided, as no good result is likely to follow the division of the adhesions between the palate and pharynx; but, when the cicatrisation leads to narrowing of the pharynx, division and subsequent dilatation with bougies may be advantageously undertaken.

Follicular disease of the pharynx is commonly met with as an accompaniment of chronic glandular laryngitis, or *dysphonia clericorum*. The pharynx and fauces are seen to be injected and roughened, owing to the hypertrophy of the glandular structures of the mucous membrane. The patient complains of dryness of the throat, and is constantly clearing it, and hawking up small quantities of viscid mucus. The hoarseness of the voice after use for a short time is a marked feature of the disease, and depends upon a similarly congested condition of the laryngeal mucous membrane. In slight cases, much good may be done by proper elocutional instruction, and particularly by teaching the patient to use his lips and tongue rather than his throat in vocalising. The use of soft astringent lozenges (catechu or rhatany), which are to be slowly sucked at intervals, and the use of a spray with a solution of sulphate of zinc (gr. 10 to ℥j), night and morning, will effect much good. In more confirmed cases, the application of a strong solution of nitrate of silver (gr. 30 to ℥j) with a brush, or painting with the tincture of iodine or liquor ferri perchloridi, will be necessary, combined with attention to the general health; but the improvement is always slow, and the remedies must be varied to suit individual cases.

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ABSTRACTS.

"Qui e nuce nucleum esse vult, frangit nncem."

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Syphilis and Locomotor Ataxy.

In a communication to a recent number of the *Centralblatt für Med. Wissenschaften*, Erb has published an additional and important series of facts regarding the relation of syphilis to locomotor ataxy. They are in perfect agreement with the results which he has previously published, and with those brought forward by Dr. Gowers. Of one hundred consecutive cases of tabes, only twelve gave no history of a chancre or secondary symptoms. In fifty-nine there was a history of secondary syphilis, and in twenty-nine of a chancre without secondary symptoms, making a total of eighty-eight in which there was either a venereal sore or constitutional syphilis, Of the twenty-nine cases with a chancre only, eleven were known to have been so treated (with mercury or iodide) as to make it probable that the sore was a hard one. The interval between the primary sore and the first symptoms of the ataxy was ascertained in eighty-eight cases, and it was between three and five years in seventeen cases, between six and ten years in thirty-seven cases, between eleven and twenty years in twenty-four cases, and more than twenty years in ten cases. In order to ascertain the truth of the objection that the large percentage of cases of ataxy with preceding venereal sores or constitutional syphilis is due simply to the commonness of the latter, Erb has investigated the history of four hundred individuals over twenty-five years of age, who were under treatment for diseases which were not suspected to have any relation to syphilis. The percentages of each hundred agreed very closely, and that for the whole four hundred was—a history of a chancre only, 11 per cent. ; a history of secondary syphilis, 12 per cent. ; and no history of either chancre or constitutional syphilis in 77 per cent. Thus, 23 per cent. had had a chancre or constitutional syphilis, while among the ataxic patients taken from the same social classes the proportion was no less than 88 per cent. Erb concludes that these figures justify the assumption that there must be an etiological connexion between syphilis and locomotor ataxy.

Abstract of Lecture on Bronchiectasis.

Delivered at the Hospital for Consumption and Diseases of the Chest, Brompton. By C. Theodore Williams, M.A., M.D., F. R.C.P., Physician to the Hospital.

Bronchiectasis, or dilatation of the bronchi, can hardily be considered a disease, inasmuch as it is present in several and somewhat differing states of the lung. It is rather to be called a result of disease, the chief characteristic being a loss of the natural elasticity of the bronchial tubes, and, therefore, an inability to resist the normal air-pressure, and to expel the bronchial secretion.

There are three principal causes of bronchiectasis, and the part which each plays in the course of dilatation determines, to a great extent, the form of the lesion; these are, (1) inflammatory changes in the walls of the bronchi; (2) accumulation of secretion; (3) increased air-pressure. The action of the first cause may be seen in cases of bronchial dilatation following bronchitis; of the second, where a tumour obstructs the main bronchus, and causes accumulated secretion behind the obstacle. In this case a whole lung, or at any rate a whole lobe, is converted into what appears, at first sight, to be a series of abscesses extending to the pleural surface, but which are really bronchi dilated from accumulated secretion. The action of the third cause is well seen in long-standing cases of pleuritic effusion, and in fibroid phthisis, where, owing to the air-pressure, which would naturally be distributed over the whole pulmonary surface, being concentrated on the limited area of the bronchial tubes, dilatation of the walls takes place.

Bronchiectasis varies considerably in extent; in many cases of bronchitis and phthisis, it is limited to a few of the tubes, and, beyond causing delay in expectoration, is of little significance. Where, however, it involves the greater part of the bronchial tree, and even if only that of one lung, it becomes a serious and very dangerous condition, forming an insurmountable mechanical difficulty in the way of expectoration. In these cases, the secretions are retained, putrefy, and give rise to ulcerative changes in the bronchial walls. Cavities, differing from tubercular caverns by their labyrinthine shape and their fœtid contents, form, and still further intensify the difficulties of the patient. The violent expiratory efforts are followed by deep inspirations, and by inhalation of the putrid matter into the hitherto healthy portions of lung-tissue; septic pneumonia supervenes, and the patient dies, poisoned by his own secretions. The cases I shall in the next lecture relate will prove to you that this mode of termination is by no means uncommon.

Before proceeding to the clinical examples of this disease, let us briefly consider its morbid anatomy and pathology.

Morbid Anatomy. — Two principal forms of bronchial dilatation, the cylindrical and the globular, are found in the *post mortem* room; in each case the tertiary bronchi are dilated, so as to measure as much, and even more, in circumference, than the primary. In the cylindrical form, the dilatation is more general, the tubes being stretched like the fingers of a glove; the walls are thickened, the submucous and mucous layers are hypertrophied, and stand out in folds. The generally tubular form of the bronchi is owing, according to Hamilton, to the traction on their ends from an adherent pleura. In the globular form, the tubes are dilated at or near their ends into pouches or ampullæ of large size, the adjacent dilated tubes often freely communicating with each other, the mucous membrane appearing to form folds or wrinkles in their interior. The lung beyond the ampullæ is generally non-vesicular from collapse and from pneumonic infiltration of the air-vesicles. The globular dilatation is sometimes fusiform and sometimes saccular, presenting a surface of mucous membrane which secretes largely, and thus leads to greater accumulation of mucus than in the cylindrical form. The walls of the bronchi are so thin, that the gray tissue of the lung can be seen through them.

In the specimens before you, there will be noticed the smooth, shining character of the lining membrane of these cavities, which generally distinguishes them from the vomicæ of phthisis; for, though it is not rare to find a phthisical cavity lined with a membrane, the membrane in this case is pus-secreting and thin, and seldom of the shining appearance of a bronchiectatic one. The cause on this is the presence in these dilatations of the basement-membrane of the bronchus, which appears to be remarkably tough and elastic, and therefore dilates with the bronchus without cracking. In some cases, however, a later stage is arrived at, when ulceration of the wall of the bronchus takes place, and the fresh excavation, which is often accompanied by gangrene of the lung, is not lined by any membrane. In the cylindrical form we find the lung-tissue generally compressed and airless, or else in a state of interstitial pneumonia, the pleura adherent, and the interlobular fibrous septa, which pass from the fibrous coat of the bronchi to the pleural surface, enormously thickened, the walls of the bronchi themselves being apparantely indurated. Another feature is the labyrinthine character of the cavity; one dilatation opens into another, and besides the recesses which are seen within the original cavity, several bronchi are to be found opening into the same bronchiectasis.

The globular form is found in connection with emphysema, and in lungs collapsed by pressure of fluid; the extent of dilatation of the tubes varies in different bronchi, being as a rule most extensive in tertiary tubes where the amount of cartilage present is very small.

The condition of the intervening alveolar tissue, as you may have gleaned from what I said, varies greatly. In cases of slight bronchiectasis, there need be no great variation from the normal standard. In many instances, large-lunged emphysema is present, though, curiously, Biermer denies its possibility, and argues that the resilience and support which such tissue would give to the bronchial tubes would prevent their becoming dilated. He, however, quite forgets that the great inspiratory efforts which produced the emyhysema might also produce bronchiectasis. Dilated bronchi often accompany the small-lunged emphysema of the aged. In many cases however, where the diliating force is great, and, especially, where some obstruction exists in the main bronchus, the alveolar tissue appears to be almost entirely absorbed, and the lung has a honeycombed appearance, being composed intirely of dilated bronchi, full of yellow secretion retained through obstruction. I recorded a case of this kind in the *Pathological Transactions* (vol. xxiv, p. 23), where the obstruction was a cancerous growth invading the right bronchus, but growths of which, in the form of villous excrescences, blocked the lumen. Sir George Burrows *Medico-Chirurgical Transaction*, (vol. xxvii) and Biermer have also recorded cases.

The pleura, in most of these cases, shows adhesions. Barth found that, out of the thirty instances, only two had the pleura unaffected; in two, there was liquid effusion, and in the rest adhesions, which as a rule overlay the seats of bronchiectasis.

In one of our specimens, you will see the distension from accumulation of secretion well shown. It is a specimen taken from a patient of Dr. Tatham's, who died of tubercular meningitis.

The lungs contained old tubercle, but also a curious condition of the bronchial tubes. The left bronchus is slightly contracted at its commencement; the secondary bronchi are slightly dilated, but empty; the terminal ones in several instances are largely dilated, *i. e.*, to the size of a walnut or filbert, and contain masses of opalesecent mucus. The lung-tissue is partly pneumonic and partly in a state of fibrosis. Here it is probable that the contraction of the bronchus, by opposing free expectoration, caused accumulation of secretion, and dilatation of the terminal bronchi.

Histology.—If we examine sections of a dilated bronchus, we soon discover the cause of its diminished elasticity. In cases of bronchiectasis originating in bronchitis, the course of events appears to be as follows; (1) congestion of the bronchial capillaries; (2) proliferation of the transitional epithelium, the ciliated being shed and the new cells partaking of the ovoid form; (3) infiltration of the submucous and inner fibrous coats by serum and migrated leucocytes; (4) the proliferation of the connective-tissue corpuscles of the peribronchial fibrous tissue. This infiltration of the inner and middle coats becomes in time organised into a species of fibroid tissue, which, pressing on the glands and non-striated muscle of the snbmucous layer, soon accomplishes their destruction. We find the muscular fibres undergoing granular degeneration, and replaced entirely by this fibroid tissue. The openings to the mucous glands become the seats of small abscesses, which are often the starting-points of ulceration of the epithelial surface, their acini being abolished by the infiltration. Bronchial cartilages disappear under the same pressure. The hyaline matrix is absorbed, leaving larger spaces in which at first the cartilage-cells remain as wandering cells; but these speedily undergo degeneration, the nuclei being only traced by globules of oil. Thus the bronchus becomes a fibroid tube, incapable of contraction, and only capable of gradually yielding to the air-pressure. The columnal epithelium being shed, it has lost the help which ciliary movement gives to expectoration. In this state of things, the increased bronchial secretion accumulating blocks up some of the smaller bronchi; and consequently, the remainder being subjected to a larger proportion of inspiratory pressure, further dilation takes place.

For the various theories which have been put forward to explain bronchiectasis by Laennec, Andral, Renaud, C. J. B. Williams, Corrigan, Gairdner, Stokes, Grainger Stewart, and Lebert, I must refer you to Dr. Grainger Stewart's excellent article (*Edinburg Medical Journal*, vol. xiii). But, in attempting to explain bronchiectasis, we must take into account the three following factors: (1) loss of elasticity of the bronchial walls through inflammatory changes; (2) the results of accumulating secretions; (3) an increase of inspiratory pressure.

As a rule, the first and third causes are generally those in operation; for, we must bear in mind, pneumonia precedes bronchiectasis in a large number of cases. Barth found it in twelve out of forty. Knapp states that twenty-one out of twenty-three of his cases died of pneumonia; but he probably refers to the secondary or septic pneumonia induced by the inhalation of the fœtid matters, which is not what we are considering at present.

With regard to the second cause, it is doubtful, provided the bronchial wall be healthy, if accumulation of secretion alone can cause bronchiectasis. There must exist a narrowing of the bronchus above, whether the obstruction be caused by the pressure of an enlarged bronchial gland, or from a lymphoid or cancerous growth pressing on or invading the channel, or, again, from shrinking of the lung-tissue around the tube, as in fibrosis or cirrhosis of the lung. The inspiratory pressure is a most powerful element; but, in severe coughing, the expiratory act, owing to partial closure of the glottis, may assist in the process of dilatation. The effect of the inspiratory pressure may be well seen in cases of chronic effusion into the pleura and of pleuro-pneumonia. Here the inspiratory force, which ought to be distributed over the whole aërial pulmonary surface, is concentrated on a few bronchi; and it is not wonderful that in time their walls should yield.

Clinical History.—In the history of this complaint, it is sometimes marvellous to note how such great changes can take place in the air-tubes without giving rise to more symptoms. In most cases, all that can be obtained from the patient is a history of winter-cough, for some years, with prehaps a slight attack of hæmoptysis: The breath has become short lately, and the expectoration more profuse. The patient lays great stress on his not losing flesh; and often states that, were it not for the cough, he would be quite well. Let us take a few of the symptoms and consider them closely. The cough is very characteristic; it is a convulsive, frame-shaking cough, often followed by deep inspirations; it is by no means continuous, the patient generally complaining of four or five paroxysms in the day, which sometimes end in vomiting. The greater part of the expectoration is frothy mucus, mostly brought up from the smaller bronchi and from the alveoli, largely intermingled with air. In time, we get the more marked nummular sputa, the inspissated mucin, and the fibrinous casts. Besides these lung-tissue is soon detected, showing that the basement-membrane is broken, and that ulceration has begun. The odour of the expectoration is very offensive, and has been assigned to the presence of various chemical combinations; to sulphuretted hydrogen; and to lactic, butyric acids, crystals of the latter having been detected in the expectoration. Various fungi have been found.

The fœtor is of the sickly rotten-egg kind, and contrasts strongly with that of gangrene of the lung, which is much more pungent and overwhelming. The taste of the expectoration, according to the evidence of a sufferer, is very sweet; and this patient stated that it annoyed her more than the fœtor, which was objectionable to her friends rather than to herself.

The aspect of these patients differs entirely from that of phthisical ones. They are generally middle aged people, with large chest of the emphysematous type, though often with some collapsed portions in the lower mammary regions. They are ruddy, and occasionally livid, seldom pale; in fact, in their appearance, they perfectly show forth the local nature of their disorder; their trouble being, in truth, of a mechanical nature—to wit, difficulty of expectoration. The temperature and pulse vary little from the normal, unless septic pneumonia sets in; and they then follow the pneumonic type. The breathing, on the other hand, is quickened. The appetite is good, and gain of weight more common thanl oss.

Physical Signs.—It must always be remembered that dilatation of the bronchi is not a disease of itself, but an affection secondary to other diseases;

and therefore we must expect it to be marked by the physical signs of its accompaniments, such as emphysema and pneumonia, fibrosis of the lung, and occasionally pleuritic effusion. The signs are, of course, those of a limited excavation, modified by those of the surrounding tissues. Where much emphysema is present, it is impossible to diagnose dilatation of the bronchi by physical signs, as a careful examination of the whole chest may fail to detect one point where even tubular breathing is audible. This is sometimes the case when the expectoration gives undoubted proof of the existence of ulceration of the bronchi, and where, from the quantity discharged at certain intervals, it is obvious that certain portions of the bronchi must be dilated.

As regards the actual character of the sound heard, there is no definite distinction to be laid down between the sounds of bronchiectasis and those of a limited cavity; but much may be learned by noting the position of these sounds. In many of the text-books, it is laid down that dilatation of the bronchi shows itself by cavernous sounds in the lower portions of the chest, and especially in the mammary and interscapular regions, and not at the apices. This, however, is an erroneous statement, as dilated bronchi are not limited to special regions of the chest. The specimens I have just shown you prove decidedly that dilatation may take place in any bronchus and in any part of the lung; and it is as possible to have the signs of a dilated bronchus in the first interspace as at the posterior base, or in the scapular region as in the interscapular. For more importance should be laid on—(1) the extent of surface over which the cavernous sounds are audible; (2) on their jarring nature; and on their (3) combination with the sounds of emphysema. When there is a dilated bronchus near the apex of the lung, the cavernous sounds are heard as in the first interspace; not midway between the sternum and the shoulder, but nearer to the sternum than the sounds of a tuberculous cavity. There is resonance too; and you are surprised that, with such loud cavernous sounds, amphoric breathing is not audible. Where the ectasia is tolerably superficial, and has no emphysematous lung in front of it, or if it has only a layer of fluid seperating it from the chest wall, the tracheal or amphoric note is often to be detected; and this generally occurs in the upper regions of the anterior chest.

The termination of bronchiectasis varies; but if extensive and involving a large number of the tubes, it is generally fatal. The contents of the dilatation, which sometimes are so extensive as to reach the pleural surface, set up further ulcerative processes, and may open into the pleural cavity and cause pneumothorax. Two of Dr. Grainger Stewart's cases and four of Biermer's proved fatal in this way. When this is not the case, the inflammatory changes round the tubes often assume the gangrenous form, and either gangrene of the lung or fœtid abscess is the result, from which the patient may sink exhausted.

A third ending, and one which has been the commonest in my experience, is death by septicæmia. Some of the fœtid material is inhaled into the healthy lung, where it induces septic pneumonia, which soon proves fatal.—*Ib.*

Abstract of a Lecture on Peripheral Paralysis. By T. GRAINGER STEWART, M.D., F.R.C.P.Ed. Physician to the Edinburgh Royal Infirmary.

After describing and demonstrating

a case of myxœdema, Professor Grainger Stewart reminded the members of the class of clinical medicine that, in one of the early lectures of the season, he had shown them one case and described two others in which he had established a diagnosis of peripheral paralysis of hands and feet. The grounds of that diagnosis were, that the disease spread upwards from the distal parts towards the proximal; that it involved the sensory, the motor, and the trophic functions of the nerves; and that, while no known facts with regard to the physiology of the brain or spinal cord could explain such a set of symptoms; disease of the nerve trunks themselves would readily do so. One of these cases which the students had had a further opportunity of studying at the bedside, was most unfortunately seized with an attack of acute double pneumonia, and died. Dr. Grainger Stewart now proposed to bring before the class the results of the *post mortem* examination. The brain and the spinal cord both appeared to be healthy when removed from the body, and the subsequent microscopic examination fully confirmed this opinion. It was, however, otherwise with the nerves in the parrlysed limbs, which, though they appeared to be healthy to the naked eye, were found microscopically to be extensively diseased. The axis-cylinder in many of the fibres was broken up in such a manner as to present a moniliform appearance, and in some parts it was completely destroyed. (Illustrated by a drawing made from the median nerve.)

Dr. Stewart pointed out that this result was very interesting in relation this particular group of cases; that it fully justified the diagnosis arrived at during life from a study of the clinical features of the case; and that it was also of great value in relation to other morbid conditions—clearing up various pathological processes which have hitherto been obscure. According to the lecturer's experience, the process is generally recovered from, and in the course of two or three months a patient, who has been completely paralysed in hands and feet, may recover the full use of all extremities. He had seen what he took to be this process on three several occasions in one individual, each time followed by recovery; but he valued knowledge regarding this form of paralysis, most of all on account of the light which it seemed to throw upon certain symptoms in locomotor ataxia. The members of the class were familiar with the fact that, in the early stages of that disease, patients frequently suffered from temporary paralysis, as well as from lightning-pains in the limbs, and that in the later stages of the process amaurosis sometimes came on, with atrophy of the optic nerve. Both of these, Dr. Stewart thought, we should one day learn to be due to precisely this process which he had demonstrated in the three patients whose cases had been referred to. In the early stages, the paralysis generally subsided, and that corresponded to the recovery which he had generally noticed in these cases of peripheral paralysis, the paralysis most frequently occurring in the third and sixth nerve of one side. He had been much interested to find that Dr. Hamilton, the pathologist to the Royal Infirmary, had come to the conclusion, on pathological grounds, that the nerves were often affected in locomotor ataxia; and to hear from him that the lesion demonstrated in the case under consideration, was the one which he regarded as characteristic of ataxia; while Professor Grainger Stewart had himself, from clinical considerations, come to the conclusion that the nerves were often the primary seat of change in that disease.—*Lancet.*

Catalepsy and Cerebral Localisation.

M. Charcot, it is well known, has done more towards the elucidation of the cataleptic and allied states, than any living investigator. In a recent lecture, communicated to the *Progres Médical* by G. Ballet, he distinguishes and describes two such conditions, which he calls respectively "Hysterical Lethargy," and the "Cataleptic State." Most cases of typical "grave hysteria" can be thrown into the first ot these two conditions by directing the eyes to be fixed steadily on some point, the tip of a penholder held in the hand, for instance; in a few moments, "the head inclines to the right, or to the lett; the eyelids close;" the limbs become motionless and limp; but the power of speaking remains. The patient can answer questions, can count, and even calculate; can recite any verses which she may happen to know by heart, and can write from dictation. This is the condition of hysterical lethargy. It, now, the eyelids of a patient in this condition be raised, and the retinæ thus stimulated by light, she immediately becomes cataleptic; the limbs, no longer limp, remain in any position in which they may be placed; and the power of speaking is completely lost. M. Lepine first performed a most curious experiment on one of these women; and his observation has since frequently received full confirmation. He found that, by raising the eyelid on one side only in a patient in hysterical lethargy he could throw the corresponding half only of the brain into a condition of catalepsy. If the left eye only were opened, the left side only became rigid and *vice versa.* But there was this remarkable difference between the two sides, that whereas opening of the left eye in nowise interfered with power of speech, opening of the right immediately destroyed it. For instance, a woman in the lethargic state was caused to repeat some verses; the left eye was opened, she continued her recitation; it was then closed, and the right eye opened instead; straightway she ceased to speak; on again closing the right eye, she began her verses again at the very place she left off, recommencing sometimes in the middle of a word. This experiment clearly points to the conclusion, long since arrived at on other grounds, that the faculty of speech has its local habitation in the right half of the cerebum.—*Lancet.*

On Open Fallopian Tube. By J. MATTHEWS DUNCAN, M.D., Physician-Accoucheur to, and Lecturer on Obstetric Medicine at St. Bartholomew's Hospital.—*Lancet.*

The uterine end of the Fallopian tube is regarded almost exclusively as a closed, or a merely potential tube or canal. It is spoken of as large enough to permit a bristle to be pushed through it; but this is done with difficulty, and, for practical purposes, it is no doubt generally closed, for fluids accumulate in the uterine cavity under considerable pressure; and the use of intra-uterine injections, whether after delivery or at other times, is feasible, because the injected fluids, as a rule, do not find an open passage in the tubes. The closure of the tube is not by such apposition of its walls as is seen when a piece of gut is pressed flat between two parallel surfaces, but is stricture-like, or such as is produced by an active sphincter.

The cervix uteri has a canal, which is generally neither closed, nor a merely potential tube, there being an easily appreciable quantity of mucus, even in its external and internal os. If it be a mere potential canal, its closure is by apposition of its anterior and posterior walls; and a large probe—the ordinary uterine probe—can be passed easily through it. Fluids do not accumulate in the uterine cavity because of want of opportunity of exit, if the cervix be in its ordinary condition. Indeed, although it is often asserted that such closure of the cervix as arises from smallness of either of its two terminal openings, or from flexion, leads to distension of the uterine cavities by accumulation of retained secretions or excretions, there is no evidence to this effect; while examples of these cervical conditions without retention are very frequently observed.

The canalisation of the cervix, or rather its further canalisation, or increased canalisation, is different from the canalisation of a tube, which begins by having no available canal or passage at all.

The opening of the os uteri, at either end of the cervix, so as, with the intervening passage, to form a cylindrical tube of considerable diameter—say that of a No. 9—is easily effected by bougie in the healthy female; and its further rapid dilatation, so as to permit the passage of the finger, may also be effected. The canalisation of the cervix in labor is well known, and to a great extent understood.

The dilatation and canalisation of the cervix has often been described as occurring in sexual excitement; and Rouget has described a supposed mechanism of its production (see the author's *Researches in Obstetrics*, p. 431). This canalisation has also been described by Beck (*American Journal of Obstetrics*, November, 1874), as seen in progress through the speculum; and I have observed, in the same way, the external os uteri forming a rounded wide opening in a woman who had never been pregnant, and whose external os was, a short time previously, in the ordinary virgin state. The improvement of the canalisation of the cervix is the chief object of most of the methods of treating sterility. (For further references, see Pallen, *American Journal of Obstetrics*, 1880, "On a Case of Abdominal Pregnancy.")

Apart from pregnancy, the otherwise healthy cervix becomes spontaneously canalised in certain hæmorrhages, which I have described in a paper on Hæmorrhage, with Dilatation of the Unimpregnated Uterus, and in another on Intra-uterine Menstrual Coagula (*Obstetrical Journal of Great Britain and Ireland*, January and March, 1880).

The canalisation of a tube is provided for by its anatomical structure, and it must take place spontaneously, regularly, and naturally, in order to transmit the fecundated ovum; but little is known of its occasional occurrence as a condition morbid in itself, or leading to morbid results. This occurrence of dilatation or spontaneous canalisation was long ignored, as may be seen by reference to the literature of hæmatocele (*Edinburgh Medical Journal*, November, 1865, p. 409). Indeed, long after its description (*ibid.*, June, 1856), many attempts were made to explain away the evidence on which its occurrence was asserted.

No one now denies the occurrence of patent Fallopian tube, for it is frequently observed in practice, the probe passing through it in making uterine investigations. It has also been frequently seen in dissections, and of this I recently had an example. Investigating the pelvic conditions of a case, destined, by a colleague, for ovariotomy, I found the uterine probe pass to the right side of the pelvis, and far beyond the limits of the uterine body, which was pretty easily and certainly felt. When the woman was on the operating table, I failed to pass the probe again through the tube, probably from the unfavorable circumstances under which the attempt was made. A few days subsequently, in the *post mortem* examination, the right tube was observed lying in the route which the probe had taken, and its uterine extremity was patent, not to the extent of being big enough to transmit a uterine sound, with its large bulbous point, but to transmit a common small surgical probe.

Interesting evidence of the patency of the tubes is found in the intra-uterine clots discharged in some cases of metrorrhagia. These, coming away as models of the uterine cavity, bear at their upper angles long clots drawn out of the tubes, and found hanging from the main intra-uterine clot. Appendages of the same appearance and origin may be found attached to the decidua in cases of abortion (see the author's *Researches in Obstetrics*, p. 296); but these are decidual in structure, and have some strength, and are not extracted from the tube, but are part of the tube. They do not indicate patency; but the extraction of a long clot, so delicate and perishable as it is, attached only by the feeble cohesion of coagulation to the main intra-uterine clot, indicates a decided patency of the canal from which it passed. In Pirie's case (*Obstetrical Journal*, Jan., 1880, p. 5), "the upper part of the clot was firm, even somewhat tough, and the tubal cords were nearly four inches long." In the case of C. Rokitansky *ibid.*, March, 1880, p. 133), the body ot the uterus contained "a three-cornered coagulum, ending above on both sides in a short thin thread running to the tubes." Whitehead (*ibid.*, March, 1880, p. 137), says that, in his case, "small fibrous prolongations from the clot corresponded to the Fallopian tubes."

Of the possible evil results of persistent patency of a Fallopian tube, the following is an example related to me by Mr. Hewer, as having occurred in the practice of his partner, Mr. Calthrop. A widow, aged 48, had a polypus of the cervix snipped off by scissors. On the fifth day after the operation, her sister gave her, gently, a vaginal injection of warm water with Condy's fluid. Whilst receiving the injection, the patient cried out, "You have killed me," and was seized with sudden pain in the right side of the abdomen. She lived for three days in great pain, till within a few hours ot death. On *post mortem* examination, there was found general peritonitis with flaky lymph on the intestines. The right Fallopian tube was seen to be much larger than the left—twice as broad; it was freely patulous. The section of the pedicle of the polypus was healthy. There were two other polypi in the cervix. Here, as Mr. Hewer says, it was plain that the injected fluid passed into the peritoneal cavity through a canalised tube, and caused peritonitis and death. Of this accident, many cases are now on record, the injections being either vaginal, as in Hewer's case, or intra-uterine.

By the same route, I have long held that blood frequently passes from the uterine cavity into the peritoneal cavity, and gives rise to hæmatocele. Indeed, I incline to the opinion that this diversion of blood, whether menstrual, menorrahagic, or metrorrhagic, is the most frequent cause of this not uncommon disease. Of course, it is necessary to suppose, what has been well accounted for, that the morbid course of the blood is mechanically easier than the natural or ordinary one through the cervix uteri into the vagina; and there can further be no doubt that, ordinarily, even when a tube is patent, the mechanically easier progress of the blood is through the cervix into the vagina. Were it not so, hæmatocele would be much more frequent than it is. I have often known a woman lose blood from her uterus *per vaginam* while a tube was freely patent.

Besides the passage of blood, there is the almost certain, but very rare, passage of a lumbricus through a patent tube (Winckel, *Die Pathologie der weiblichen Sexual Organe*, S. 321). This kind of passage is effected by the movements of the animal.

Further, openness of a tube is a necessary condition for the accomplishment of the wandering of the ovum in certain cases of extra-uterine pregnancy.

In conclusion, it is necessary to remember that, besides natural and morbid conditions of patency, there may be unnatural absence of temporary patency, or of occasional dilatation of the tubes; for it is probable that they dilate during sexual excitement, and permit the passage of the semen. Indeed, it is scarcely conceivable that semen can permeate the tubes while they are in their usual closed state. This absence of dilatability of the tubes, or their rigidity, may thus be a cause of barrenness.

The proposition of Tyler Smith to catheterise the tubes, and thus cure sterility, was brought forward under the influence of different theoretical views from those expressed in this paper. It has, as yet, led to no more practical result than the proposal of Froriep to close them by cauterisation, in order to produce sterility.

Removal of the Whole Tongue.

At a recent meeting of the Medical Society of London, the President, Mr. Gant, described the case of a man in the Royal Free Hospital, from whom he had recently removed the whole tongue for epithelioma of that organ. The disease had commenced eighteen months before, on the right side of the tongue, opposite a jagged second molar tooth; the patient was also a great smoker. For the first nine months, the growth remained stationary; it then become painful, and ulcerated rapidly. Caustics had been applied. No connection with syphilis was traceable. There was frequent hæmorrhage, and the patient's general strength was much reduced when he came under Mr. Gant's care two months ago. The tongue was then enlarged, and a hard mass of ulcerated tissue implicated the right side and base of the organ, reaching at its centre across the dorsum of the tongue to the left. There was great pain at the part, and some glands at the angle of the jaw were hard, enlarged, and tender. The patient having been fed up, and treated, but without local benefit, with large doses of iodide of potasium, the tongue was removed. The patient being anæsthetised by the mixture of alcohol, chloroform, and ether, an incision was first made from the left angle of the mouth down to the angle of the lower jaw, avoiding the parotid duct, and exposing the base of the tongue. The facial artery was twisted, and the tongue seized and drawn forwards out of the mouth. Two stout curved needles, set in handles, were then thrust from beneath the tongue, through its base, in front of the epiglottis; the loop of a long chain *écraseur* was passed over the needles around the base of the organ, the frænum being divided, in order to fix the loop more closely around the curve of the needles. The *écraseur* was then worked slowly, by one movement of the handle every minute; and, as the substance of the tongue yielding under the slow strangulation, the instrument was worked more slowly, a movement being made every two minutes. In the course of about twenty minutes, the tongue was completely detached, leaving the floor of the mouth without any hæmorrhage at the time of operation or subsequently. The buccal incision was accurately closed with four harelip-pins and twisted suture, a fine hair-suture further guarding the corner of the mouth. After the operation, the patient was, for the first three days, fed entirely *per rectum;* he then took fluid by the mouth. The wound in the cheek healed by the first intention; the last of the harelip-pins was removed on the six day. The pulse and temperature remained good throughout the recovery from the operation. The patient left the hospital on the eighteenth day, feeling well and suffering no pain. The glands near the jaws were diminished in size, though somewhat enlarged. Mr. Gant dwelt on the ease with which the base of the tongue was reached by this operation, and urged that the *écraseur* should be very slowly tightened, so as to avoid all possibility of hæmorrhage. —*The Lancet.*

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CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

A Case of Fracture. By J. THOS. STOVALL, Columbia, Ala.

Allow me to lay before the readers of your valuable Journal a case in private practice.

Was called on the 25th of Jan., 1880, to see William H——, a farmer residing thirteen miles in the country, suffering, so messenger said, from a "fracture of the arm." Reached the house of my patient about 2 o'clock P.M., and found his arm in a most dreadful condition. From neglect and continued applications of liniments, poultices and various patent nostrums the arm was enormously enlarged, being about four times its normal size and bare of skin from juncture of upper with middle third of humerus to tips of fingers. From an examination I found fluctuation at various points. I at once made several deep incisions at the most dependent part of the arm and gave exit to about twenty ounces of very yellow offensive pus. Upon an examination into the history of the case I arrived at the following, viz.: That his arm was fractured at the middle of lower third of the humerus by a *minnie* ball at Jonesborrough, Ga., on the 31st of August, 1864. That an intermediary amputation was performed by a Dr. Goff of Florida, (without anæsthetic). The wound healed very well considering the circumstances, which were very unfavorable. The bone united, but has given a great amount of trouble at various times since, pieces of the bone working out, setting up acute inflammation, disabling him from work each time. On the thirteenth of January, 1880, while lifting and working with some heavy timbers for building a house, he managed to break his arm in precisely the same place as before (in '64). Instead of procuring the assistance of a surgeon, he through economy and perhaps a superabundance of self-reliance (peculiar to some individuals), decided to be his own physician and save a fee; but not so, he endangered his life and *tripled the bill.* After having exhausted the category of domestic remedies, patent medicines, old women's prescriptions etc. he procured the assistance of a physician. When I first saw the case I thought it almost hopeless, for the inflammation had extended the whole length of the arm, reaching as high as the middle third of the clavicle. Amputation could not, with propriety, be performed at the shoulder joint. What was I to do? The patient with a pulse of 120, temperature 103° 5′ to 104° 5′; skin dry, tongue dry, furred and fissured, with tips and edges very red; appetite gone, intense pain in arm and shoulder, bowels constipated, eyes bright and glistening, pupils contracted and a great amount of debility from the diffused suppuration which had been constantly draining the system, and which, if not stopped, would have undoubtedly proved fatal very soon.

The first step taken at my first visit was to give vent to the pent up pus, which if allowed to remain might produce septicæmia. As I have already said in this article a great amount of pus escaped. The arm was next bathed well in warm water and castile soap, dressed with carbolized oil (1 to 14) and wrapped in cotton batting. Before leaving he was ordered to keep bowels in a soluble condition; to have a good liberal diet of eggs, butter, cream, chicken, etc. He was directed to partake liberally of egg nog, and to take morphia sulphas, *pro re nata*, to relieve pain, procure rest and produce sleep, and for its specific effect. Owing to the rapid accumulation of pus, the dressing was ordered to be removed as often as it became obnoxious, which was several times a day. Utmost cleanliness was enjoined upon the nurse (his daughter), who by the way was an extraordinary nurse. After giving directions I left my patient, not having any hopes of saving his arm, and very little of his life. I made my next visit the next day after; and must say I was happily disappointed, for I found him under rather more favorable circumstances. He as before seemed perfectly cheerful and composed, not having any idea of dying, not if he could help it. At this visit I made other incisions, giving exit to a great quantity more of pus. I now put carbolized tents in the old incisions by which to drain away the decomposed offensive pus. It would seem incredible to hear what quantities of pus escaped from this arm.

I got rid of all the pus possible at this visit by manipulation, pressure, etc. Continued same dressing and treatment as before, only giving him some quinia sulph. (10 grs.) every other day. I will say, however, that at the second visit the arm was reduced greatly in size, though far above normal then. In about four days from this time I made my third visit. The improvement was steady until my third visit. I then used injections of carbolized glycerine and used same as with patent lint as local dressing. Brandy and a rich diet were now ordered. Mur. Tr. Iron was now given 12 gtt. 3 times a day. Morphia was continued *pro re nata*. At my next visit on the 6th of February, 1880, I found him getting along extremely well, hope now being entertained of saving his arm by proper care. Continued same treatment. At my next visit I changed the Mur. Tr. Iron for Ferri Cyanide. Appetite now good, rests well at night, has no pain. Now at my last visit he was doing admirably well; the arm of normal size, there being three open ulcers left as a result of the extensive suppuration. These are fast improving under the following:

℞	Salicylic Acid, . .	gr. x.
	Quinia Sulph., .	gr.xx.
	Iodoform, . . .	ʒi.
	Adeps, . . .	℥i.

M. et ft. ung. Sig. To be applied locally on lint two or three times a day after washing well with castile soap and warm water.

Pasteboard splints were now applied after enveloping lint well in cotton batting, places being left, however, for dressing ulcers, and a bandage being applied from the ends of the fingers up. The arm was placed in a sling on a piece of white pine about 11 inches long and 4 wide, with a hole in each corner for tapes, and it well padded. The tapes were tied around the neck. This gave support to lower arm, it being flexed at right angles with upper arm. The iron and quinia were continued in tonic doses.

Remarks.—In this case it is somewhat remarkable that the bone should be broken in exactly the same place as previously, sixteen years ago. It shows how through neglect the arm had become enormously enlarged, skin greatly thickened, until desquamation had taken place; that the fragments of bone had been kept in apposition until a firm union could take place, although under such extremely untoward circumstance, namely: diffused inflammation, suppuration and exhaustion. The bone is now firmly united, there being no lengthening, shortening or crookedness at all, and that no splints or bandages had been used until last visit, and these were only used to retain dressing and give support to the limb, as the patient was very tired of being in bed so long, desiring to walk about some, and attend to domestic matters a little.

This gentleman is over 60 years of age, spare built, delicately constructed, but has more patience, forbearance and will I ever saw. Why, he has got the constitution of the devil himself, or he would never have got well. Another thing very remarkable is his not suffering from septicæmia, as he had every prerequisite necessary for the development of that trouble. I think his not suffering from this terrible trouble is due to the antiseptics which were used locally, enough being used, however, to counteract the effects of the septic materials in the system. After noting the amount of neglect, great exhaustion, age of patient, and general symptoms with such a complete cure, I consider it a very unique case.

This case is not reported as I would like, nevertheless these are undisputable facts which no man can get around. If these remarks have been of any use to any brother practitioner in the practice of surgery, I feel I have fully accomplished all I designed. I will give some more cases in future.

Pilocarpine in Cerebro Spinal Meningitis. By J. P. HERVEY, M.D. Gainesville, Texas.

I enclose you the following cases. Not keeping a case book I am not able to report them with that exactness of detail that is so much to be desired. My only excuse for reporting them at all is the seeming remarkable potency in a disease so intractable as the above of a single drug.

Was called to Edward M., aged twenty-one, male farmer, on the 19th ult.; attacked on the 18th with severe cerebral symptoms, with severe pain in back of neck and head. Co. cath. pills with effect. When I saw him he was almost wildly delirious and seemed unconscious of everything except that he had severe pain in his head. Having convinced myself that I had an average case of cerebro-spinal meningitis to deal with, and not knowing any mode of treatment of decided value, I gave him at 6 P.M $\frac{1}{4}$ gr. mur. pilocarpine and repeated same at 7 P.M, obtaining in a very remarkable degree the peculiar action of the drug on skin and salivary glands. As soon as this was the case the urgency of his symptoms began to subside, and at 10 A.M. on 20th, he was able to talk rationally and expressed himself as being entirely free from pain in the head, which has been the case up to this writing—though I have had some little trouble from bronchial and enteric symptoms.

Dolly M., sister of Edward, had on the 23d ult., a well developed case. The family supposing that it was a case of sick-headache, to which she is quite subject, failed to call my attention to the case as soon as was desirable. I immediately began with pilocarpine after giving a cathartic, and as I could not remain substituted Ext. Jaborand Fl., given for effect. As in the above case, as soon as the full effect of the drug was established, the symptoms began to subside and this morning I discharged both cases. The remedy in these cases was given without any of the usual adjuvants, and stood alone on its own merits. I may, perhaps, be too sanguine, but think that Pilocarpine will at least prove of value in such cases, at least I will if I have an opportunity give it a full trial.

P.S.—Since writing the above which was done in perhaps too much haste, I regret that both Edward and Dolly M. relapsed during a severe norther that prevailed on the night of the 26th. I saw them on the morning of the 27th and repeated the remedy with perfect success in Dolly's case but failed in Edward's. Notwithstanding this I have still great confidence in the remedy, and as I have had no other cases to try it in, and as summer is on us, perhaps will not during this season.

Epileptiform Convulsions. By J. T. Stovall, M.D., Columbia, Ala.

I was called about the 20th of May, 1880, to see Susan Kirkland, daughter of a farmer living in the country. I obeyed the summons and found my patient having epileptiform convulsions. During the twenty-four hours before I was called in she had as many as thirty, some being very hard ones while others were much lighter. I immediately put her upon the following:

℞ Monobromate of Camphor, ʒ ij.
Bromide of Potassium, . ʒ iv.
Tr. Valerian, ... ℥ iijss.
Mucil Acacia vel Aqua Dist.
qs. ad, ... ℥ iv.

M. Sig. Shake well. Teaspoonful every hour until the convulsions were entirely relieved.

After relieving my patient for the time being, I left with an appointment to see her the next morning.

At my next visit I enquired particularly into the history of the case. I elicited the following:

The girl was then in her fifteenth year. Had been having "fits" (as they termed) ever since she was nine years old. These spells grew worse gradually, being as bad at one time as at another until she was about twelve years old, when they would be much more severe at one time than at another; the spells were much worse at times, recurring every four weeks from the age of twelve until began menstruating. Up to the age of nine she had always been in fine health and as intelligent as the balance of her brothers and sisters. At the age of eleven her mind became apparently impaired. You could not elicit a satisfactory answer to a simple question. If she replied at all she would as frequently give a silly answer as an intelligent one. She would sit in her chair all day in a dull, stupid condition with her eyes closed, her head bowed apparently asleep.

Now as to the family history I could

not find hereditary predisposition to epilepsy in either her father's or mother's people. Her mother had menstruated at the age of twelve. Her sisters also had menstruated very early, one at eleven and a half, two at twelve, and one at twelve and a half. This is the history *in toto* up to the beginning of my treatment.

As a matter of course she had her name changed, slept on razors, took some hair from the end of a dogs tail, and a *yaller* one at that, and buried it under a log, and much more nonsensical stuff without benefit.

I put her immediately upon the Bromides, given in large doses three times a day and at bed time. I kept her upon this for six months. To increase her appetite and give tone to stomach and bowels, I prescribed following:

℞. Tr. Nux vomicæ, . . . ℥ ij.
Podophyllin, ... gr. viij.
M. Sig. Seven drops three times a day before meals.

To enrich the blood I administered Phosphate of Iron in five grain doses two or three times a day.

Under this treatment the epileptiform convulsions were entirely relieved and her general health improved some. Her mother informed me that for three or four days in every month she was worse and suffered extremely from *leucorrhœa.* At this time she suffered intense pain in the lumbar region, lower part of abdomen and sides with giddiness and headache. I persisted in my treatment and finally not realizing as much benefit as I thought I should, I determined to make a vaginal examination, and ascertain if there was any obstruction of any kind which might be the cause of the condition of the case. The *mammæ* were as large as an apple, hair upon the pubes and every negative sign that indicated she should menstruate. I introduced my finger very easily and then a small Ferguson's glass speculum. The os uteri was hard, felt more like cartilage than flesh. The os externum was entirely wanting there being merely a depression at the place where it should be. I ordered vaginal injections of water as warm as could be borne with a Davidson's syringe twice a day for two weeks at which time I saw her again. I then introduced a speculum and made an artificial opening, and introduced a bougie clear up to the fundus with apparent ease. The obstruction only existed in the lower half, the infra vaginal portion of the womb. I used a small scalpel wrapped to near its point to perform the operation with. Ordered vagina syringed out twice a day with weak solution of carbolic acid. I continued vaginal injections of hot water with glycerole cotton to neck of womb to be reäpplied daily. Continued this for weeks. Then I resumed the former medical treatment; Phosphate of Iron, Tr Nux Vom. Podopyllin and Bromide with out door exercise, and plenty of sunlight and a generous diet.

Three weeks after I performed the operation she had her catamenia which was slight. Ever since she has menstruated freely.

She has regained her mind and to be short her general health is splendid. She occasionally takes a dose of Bromide. I consider this case of interest on account of the symptoms being so pointed as to uterine trouble through the whole course of the case; and the almost immediate relief experienced from the operation. I know that the system undergoes certain changes at the age of puberty, and some cases of this kind get well spontaneously at this age; but this case surely would never have done so without surgical interference. Was this uterine trouble the predisposing or exciting cause? Partially both, but I am inclined mostly to think the latter.

MEDICAL SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

PROCEEDINGS OF THE AMERICAN MEDICAL ASSOCIATION. 1881.

The Association met at Mozart Hall, Richmond, Va., May 3d. Called to order by Dr. Cunningham, Chairman Committee of Arrangements. Dr. H. D. Holton, of Vermont, Vice-President in the chair. Dr. W. B. Atkinson, Secretary. Prayer by Rev. Bishop J. J. Keane. Address of welcome by Governor Holliday. Roll called. Ex-Presidents escorted to platform. Invitations of various kinds to Association read and accepted with thanks. Letters of regret on account of absence from Drs. J. M. Sims, W. O. Baldwin, W. H. Anderson, H. Carpenter and F. Pratt. Dr. John T. Hodgen at 12 o'clock, delivered his Presidential Address; a good one. Thanks tendered and the usual copy for publication requested. Dr. J. H. Warren read the report of the delegates to foreign Bodies. The various sections met in the afternoon. Reports of their Scientific Proceedings will be given in future numbers.

SECOND DAY. Prayer by Rev. Dr. Peterkin. There was a long debate on the subject of amending the code of ethics. Question made especial order for next day. Dr. Brodie reported his visit to the Canada Medical Association; Dr. John H. Packard, Chairman of Committee, in regard to establishing an Association Medical Journal; report favorable and recommendatory. Discussed by Drs. Toner and Davis. It was resolved that the President appoint a committee to report upon the time, place and terms of the publication of a Journal; to elect an editor, fix his salary and arrange details. The election of an editor was reconsidered and rejected; and the Secretary and Treasurer were placed upon the committee. It was determined to publish in the next volume of Transactions an index of all previous numbers. Dr. Toner then made the usual report on necrology. Association then adjourned.

THIRD DAY. Met at 10 A.M. The usual prayer. Report of Committee of Arrangements made by its chairman Dr. Cunningham. Dr. Gross moved to make a new Section on Dentistry. Motion lies on the table according to rule for one year. Dr. Hunter Mc Guire, Chairman of the Section on Surgery, read a paper on operative interference in Gun Shot wounds of the peritoneum. This paper will be further noticed in next number; it was highly praised and duly referred. Dr. J. S. Billings then read a paper on "Some of the Results of the Tenth Census as regards Mortality Statistics." This paper was prepared with care and ability and was much appreciated. Dr. N. S. Davis made a long report in regard to Atmospheric Conditions and reccommended the appointment of a committee to be known as the "Standing Committee on Atmospheric Conditions and their relations to the prevalence of Diseases;" and that $500.00 be allowed them for the accomplishment of the purposes recommended; adopted. (!!) Association then adjourned. The afternoon was given up to Section work.

FOURTH DAY. Met as usual at 10 A. M. Committee on Nominations made its report and the following officers were elected unaminously, viz.: Dr. J. J. Woodward, U. S. A., President. Vice-Presidents, Drs. P. O. Harper, Ark., L. Conner, Michigan, Eugene Grissom, N. C., and Hunter

McGuire, Va. Other officers unchanged. Vacancies in Medical Council were filled. Next Place of meeting, St. Paul, Minnesota. Code of Ethics' amendment again attacked and further discussion again postponed for next day. Dr. Keller's amendment was carried, viz.: that in selecting officers and committees all selected shall be present. Exception is made in regard to the Committees on Dermatology, Arrangements, and Credentials. The members of all the Sections were next appointed and duly announced. The omnibus resolution of thanks was then passed and the Association then adjourned; to meet at St. Paul, Minnesota, 1882.

THE PRESIDENT'S ADDRESS.

Colleagues of the American Medical Association:

"In obedience to the time-honored usage of the Association, I shall ask your attention to a few thoughts, such as may be supposed to befit the occasion of our coming together for our annual meeting. But, first, in the name of the Association, let me express to the local committee of arrangements, and to the medical profession and the citizens of Richmond, our grateful acknowledgments of the hearty reception which has been tendered by our Governor in this, the capital city of the oldest of American States, the historic mother of American Presidents.

"The recent progress of medical science has been marked by exceptional strides, both in the direction of extending the domain and perfecting the methods of operative surgery."

He alluded to the progress in medicine, and then proceeded to bestow a passing glance upon some of the causes which militate against the success of the surgeon by something betraying him into error; again embarrassing him in his choice between conflicting plans of treatment, and too often frustrating his best directed efforts.

He divided surgeons into those seeking to perform every practicable operation, and the other, avoiding operations whenever it is possible.

The former include the bold, the enterprising, the ambitious and the reckless of our profession.

The other, the timid, the conservative, the cautious and the procrastinating. The former class is largely made up of young men—enthusiastic and full of inspiration, caught from professors whose task is to make the way clear and easy, students of the current medical literature, which teems with new suggestions and is crowded with reports of remarkable cases and wonderful opeations, generally ending, or reported as ending, happily to the patient and to the great credit of the operator.

Simon excises a kidney, turns an aberrant ureter into the rectum, touches, through the natural passages, a stone in the kidney; and immediately hundreds of ambitious surgeons are seeking kidneys to excise, ureters to to turn, and renal calculi to touch. Battey removes an ovary for the relief of an obscure nervous disorder; and forthwith ovaries are removed for almost every imaginable nervous disorder. Billroth cuts out a cancerous larynx; or a diseased pylorus; and at once a demand springs up for similar cases, and the daring operations are repeated in all the four quarters of the globe.

The second class is recruited largely from the first and often only after many lessons of bitter disappointment drawn from the experience of many and grave disasters.

The practice of seeking cases for operation and for operating by blindly following the dicta of authority, without a full understanding of the condition to be relieved, is well illustrated by two surgical procedures which have been resorted to, with far too great frequency, as I believe, by gynaecologists during the past and present decades. Of one ot these procedures, the division or the cervix uteri for flexures, an operation without proper foundation in pathology, which was generally useless and often dangerous, and which always entailed deformity. Emmet holds the following energetic language; "Since the practice of indiscriminate division of the cervix was first introduced by Professor Simpson, more malpractice has been prepetrated throughout the world in the name of this simple operation, than from any other procedure known to the profession."

So, too, great wrong has been done in seeking to follow the lead of Dr. Emmet in the performance of operations for the cure of lacerations of the cervix uteri. From the large number of operations reported by many practitioners, it may be fairly concluded that it has often been needlessly and unprofitably performed.

A simple knowledge, however accurate, of the parts involved, does not qualify one to make an intelligent prognosis, to decide upon the advisability of an operation or treat judiciously even such deseases as consist mainly in pathological changes in the part in question—to say nothing of the many cases in which subjective symptoms are referred to a particular part, when they are in fact but the local expression of some remote or possibly constitutional trouble.

Herein lies a danger which threatens the profession, through the adoption of exclusive specialties by those not well trained in general medicine. It cannot be denied, that the early and exclusive study of the affections of a part tends to narrow the intellectual grasp and cramp the powers of the man who yields to the influences incident to such partial training. In the best sense, a specialist is a physician and something more; in the worst, he is something else and something less than a physician.

The rapid progress made of late years in the precision and perfection of regional surgery, the brilliant triumphs secured and the almost unlimited possibilities attained, combined to tempt surgeons to reckless operative procedures. Captivated by the knowledge that almost every region of the body has been and therefore may be invaded without necessarily destroying life, we are in danger of overlooking the general influences which are ever present to modify and control the results of local injuries.

The local conditions calling for surgical operations are, besides, more easily studied by the young surgeons than the general conditions which may forbid them, and are more fully discussed in the text-books and college lectures. To learn what to do and how to do it, is always more attractive to the student than to be told what not to do. And this is especially true if the thing not to be done is something which he believes he can do well.

On the other hand, we recognize certain diseases and conditions, in which, however defective our knowledge may be in some respects, we are at least certain that very early operation is indicated, both as involving a minimum of risk, and as offering the best, or perhaps only chance, of saving life or of averting great calamity. In this class, we include tumors, benign or quasi-malignant.

The propriety of the early removal of quasi-malignant tumors is nowhere better illustrated than in the case of sarcoma of the choroid—a disease which, by the aid of the ophthalmoscope, can now be positively and accurately diagnosticated at a very early stage of development. Left to itself a few months, it will surely break through the outer coat of the eye-ball, and soon develop into a fatal and hideous tumor of the orbit, complicated probably with sarcomatous deposits in distant parts. Removed at an early stage by enucleation of the eye-ball, it may never return *in situ*, and life may be indefinitely prolonged.

In rodent cancer and in epithelioma, we now expect a cure by excision, provided it is early enough; and even in mammary scirrhus, removal of the breast has exceptionally effected a permanent cure.

Sympathetic ophthalmia affords a striking instance, which may result either from not recognizing a danger in season, or from a want of promptness in dealing with it.

Scarcely any fact is better established than that a high condition of health is not the condition which best fits the patient to bear the forced confinement, the impaired digestion, the imperfect assimilation and the perverted excretion which follow any serious bodily injury or grave surgical operation. In such patients, we have learned to dread surgical fever and active inflammatory complications, leading possibly to septicæmia, and ending, it may be, in death.

So, too, that standard of health marked by an unusual ability to bear continuous mental strain, taxing the digestive and assimilative organs to their utmost, is not that under which the effects of shock are best borne, whether it be the shock of a severe injury or of a capital operation.

On the other hand, a man whose life is not marked by excessive tissue change, whose digestive, assimilative and excretory organs are not unduly taxed, and whose nervous system is not attuned to conditions of intense mental strain, is likely to bear well the shock of injury and the nutritive changes incident to prolonged confinement. Again, the chronic sufferer, whose nutritive and excretory organs have become educated, so to speak, to make good the excessive waste incident to any continuous drain, is often much better fitted to endure a grave surgical operation than is the new recruit of the army of sufferers. Very often the surgeon is compelled to act in the presence of morbid conditions of the most complex character.

Thus, in strumous manifestations in connection with chronic, suppurative disease of the joints and bones, the profuse discharge makes the most exacting demands upon the nutritive functions, while the close confinement, pain and loss of sleep unite to destroy the appetite and impair digestion and assimilation. In such a condition (so clearly set forth in the case of hip disease by our distinguished ex-President, Dr. Sayre), we recognize in the cachexia the effect rather than the cause of the local trouble; and by resection or amputation of the offending limb, we may arrest the exhausting discharge and restore the disturbed balances between the processes of nutrition and waste.

The dangers in certain depraved conditions of the body from injudiciously delaying an operation are forcibly depicted by Robert Barnes. He says; "My experience leads me to conclude that, in cases of urgent disease, there is more frequent occasion to regret having delayed the operation too long than having had recourse to it too soon.

"When through obstinate vomiting, for example, nutrition has long been arrested, the starved tissues craving for supplies and falling into disintegration, feed the blood with depraved and noxious materials; the system feeds upon itself and poisons itself; the poisoned blood irritates the nervous centres, and these centres, wrought to a state of extreme morbid irritability respond to the slightest peripheral uterine or emotional excitation. All nervous energy is thus diverted from its destination, and exhausted in morbid action. Irritative fever ensues; the pulse rises to 140 or more; no organ of the body is capable of discharging its functions; for the pabulum of life is cut off at its very source. At this point, labor, whether it occurs spontaneously, as it often does, or be induced artificially, comes too late. The tissues are altered, the powers are impaired beyond recovery, and death soon follows."

Shock may act profoundly upon the whole economy. Arrested digestion, perverted assimilation, suspended secretion, and limited excretion may occur to vitiate the nutritive fluids of the body. Elements which should go to feed the tissues and provide materials for secretions remain unappropriated; excrementitious substances accumulate, and the body becomes gradually saturated with effete matters.

Operations for the relief of patients with old and tight urethral structures, complicated with disease of the kidneys, afford illustration of the serious consequences which may follow shock in an already diseased organism. Internal division or forced dilatation of such a stricture may be attended with a degree of shock sufficient to arrest for the time the heart's action; or it may so act upon the whole nervous system as to check secretion and excretion generally. The diseased kidneys may thus cease altogether to perform their functions, leading to speedy death from uræmic poisoning; or, in the case of less aggravated renal trouble, the blood, becoming surcharged with morbid material, may no longer suffice to maintain the nervous centres in effective action; assimilation, secretion and excretion may all fail, and death ensue from septicæmia.

Anæmia, resulting from sudden loss of blood, is particularly unfavorable to surgical interference; besides the actual deficiency of blood, the diminished tension of the blood vessels favors the absorption of septic products at the site of the injury, while the blood, diluted and vitiated by the additional fluids absorbed from the tissues, becomes loaded with effete organic matter, ready to take on putrefactive changes. A familiar instance to susceptibility to septic influences after a large hæmorrhage will occur to every obstetrician who has learned how often metritis and septicæmia follow excessive *post-partum* hæmorrhage.

Besides want of space, another reason for the omission of reference to other conditions which may demand or forbid a resort to the knife, is our want of exact knowledge. Especially is this true of those constitutional conditions we term diathesis. Using the word in its broadest sense, diathesis is any condition varying from the normal standard which disposes to the development of disease in the presence of trivial exciting causes. Other conditions which we habitually include under diathesis are themselves diseases —such, for instance, are scurvy, the scrofulous habit, tuberculosis and syphilis. A diathesis may be transient or permanent, retrogressive or progressive; it may be so marked in its manifestations as to force its recognition upon even the most careless observer, or it may be so obscure as to elude the most painstaking scrutiny; and yet it may respond immediately and disastrously to an injury. In acknowledging our ignorance regarding the precise nature of such variations from the normal standard as we believe must exist in diseases like scurvy, scrofula, tuberculosis, etc., we recognize the existence of wide uncultivated fields, rich, no doubt, in promise to future investigators. A more perfect animal chemistry, a more thorough histology, and a deeper research into the possibilities of pathological change, will doubtless throw many a ray of light into regions where the darkness is now too dense for our vision to penetrate. To these fields coming generations of physicians will surely be attracted, in the faith that as man advances in knowledge, and approaches somewhat nearer to the comprehension of the perfect wisdom which designed the wonderful physical organism, through which he is brought into relation with the world around him, he will be enabled to solve more and more of the difficult problems which now perplex and baffle us, and will gradually raise medicine to a position more nearly akin to that now accorded to the exacter sciences.

On motion of Dr. Brodie, the thanks of the Association were tendered the President for his address, and a copy of the same requested for publication.

Meeting of the New York County Medical Society.

The meeting was called to order by Dr. A. E. M. Purdy, the President.

The minutes of the preceding meeting were read and approved.

The report of the comitia minora, recommending for membership Drs. Wm. L. Hardy, H. Richards and F. J. Hand was approved by the society and certificates of membership presented.

The paper of the evening, entitled "*The Causes of Death in Acute Pneumonia*," was then read by Dr. Alfred L. Loomis, in which he said that he recognized three varieties of acute pneumonia :

1st. Croupous or vesicular.

2d. Pleuro-pneumonia.

3d. Broncho or catarrhal pneumonia.

In answer to the question "May pneumonia be classed among the fatal diseases ?" he gave numerous hospital and private statistics, collected from home and foreign hospitals, from which the conclusion was arrived at that the average rate of mortality in pneumonia was 20 1-10 per cent.

The statistics also showed that while pneumonia was on the decrease in England it was decidedly on the increase in New York.

In an analysis of 255 cases, made by Dr. Loomis, 168 of the whole number recovered, of which number 131 were uncomplicated. From this analysis, and other records as well, he deduced the very natural conclusion that the rate of mortality is far higher in complicated cases.

Pulmonary œdema and heart clots are found in autopsies of deaths by pneumonia, but these cannot be justly assumed to be the cause of death, though they are maintained to be by some.

It might be well, the author said, to inquire into the conditions which allow of blood clotting during life. In pneumonia it had been proved that the fibrin factors of the blood increased 400 per cent., the heart was also in a flabby condition, so that these two causes combined would naturally operate in whipping up the blood, and producing stagnation in the right ventricle.

It has been urged that the heart becomes a tired out muscle, on account of the increased effort necessitated by obstruction of the pulmonary circulation. That parenchymatous degeneration of the heart substance is the cause of death, or that high temperature causes heart failure and death. It is true that heart failure is a common cause of death, and although it is maintained by some writers, as Juergensen, that pneumonia is a constitutional disease, with a specific exciting cause, to me it seems more appropriately to occupy the middle ground between local and constitutional infectious diseases, and to be allied to both, though it is not contagious or epidemic. The complications of pneumonia interfere with the heart's actions through interference with its nerve supply. May it not be reasonably assumed that acute pneumonia is a disease in which blood poisoning causes failure of nerve supply, which in its turn induces heart insufficiency and death.

This insufficiency of the heart begins much earlier than it is usually exhibited. Very early in the course of the disease, pneumonic consolidation causes obstruction of the pulmonary circulation, and consequently increased labor for the organ abnormally weakened by failure of nerve supply.

If then death in these cases is due to failure of nerve supply causing much heart insufficiency, it behooves us to inquire as to what measures shall be employed to stop the development of the causes on which this failure depends.

An eighteen years' experience has convinced me that during the developing period of the disease, opium better than any other remedy lessens the loss of the nerve supply of the heart. I therefore keep my patient in this stage of the disease under the influence of this drug. This method of course does not interfere with the application of cold or the administration of stimulants.

After the conclusion of the paper the resignations of two delegates to the State Medical Society, namely, Drs. Pooley and Castle were laid before the Society.

The election of two delegates to supply the place of those resigned being in order the following gentlemen were nominated; Drs. Carpenter, George H. Mitchell, A. F. Liautard, E. H. M Sell, J. A. Monell, N. G. McMaster. After several ballots had been taken Drs. Carpenter and McMaster were elected.

Dr. A. Jacobi read a letter from Doctor Rindfleisch of Germany, who acknowledged his election to honorary membership. Dr. Carpenter moved that the comitia minora be authorized to fill the delegation to the American Medical Association and asked the members who wished to go to send in their names, after which the Society adjourned.—*Medical Gazette.*

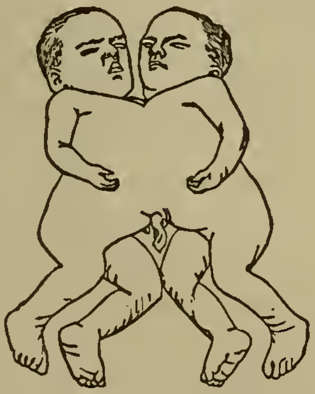
CORRESPONDENCE.

"Sit mihi fas scribere audita."

TEXARKANA, TEXAS,
March 20, 1881.

DR. E. S. GAILLARD:

Dear Sir:—Enclosed I send you photographs af a pair of twins I delivered on the 12th inst. It is one of the most remarkable cases known to American obstetrics. Their mother, Mrs. L. R. Blackstone, is a native of Atlanta, Georgia, aged twenty-three years, has been married eighteen months, miscarried twice, once at six months and again at six weeks. She is of fair complexion, light hair, blue eyes, nervous temperament, weight ordinarily 110 pounds. No twins on either side for generations back. You will see from the photograh that these children are well formed and fully developed in every particular. The connection seems to be of a bony character commencing about or just below the sterno-clavicular articulation and extending down to the umbilicus, the two children having one common sternal bone. The connection measures seven inches in length. The false or floating ribs are as in other natural children. There is but one umbilicus, one cord, and but one placenta; each child has a separate chest, abdomen and hips; each has two arms and hands, two legs and feet, each a separate head perfect in formation. Their features are regular, symmetrical, in short they are perfect little beauties, with a full coat of black glossy hair. I have named them Texarkana in honor of our thriving city, as we have two cities connected by a State line—two States by a city. The children measure 17 inches long and weighed 14 pounds; the heads of each measures occipito-frontalis 4½ inches; in bi-parictal 3 inches; across their chest 7 inches. They were still-born, the difficulties present during the progress of labor necessitating decapitation of one of them. The mother is still living, and will, I think. recover. It required an extraordinary amount of tact and coolness to engineer the case through and save the mother, as convulsions and hæmorrhage were fast and profuse. Here is a drawing of them.



I have the little girls in preservation in alcohol for the benefit of medical science; would like to hear from the Profession generally. You can use this if you like. What process is best to preserve them?

Respectfully yours,

C. C. Burke, M.D.

Note.—The above cut is a "photo-engraving" prepared from the photograph sent.—Ed.

Halesboro,
Red River Co., Texas,
March 24th, 1881.

Dr. E. S. Gaillard.

Dear Sir:—I send you the following which is a report of a case of hepatic colic treated by me with olive oil a couple of days after seeing it recommended in your Journal.

Mrs. H., 45 years of age, of active habits and wife of a farmer. She has been troubled with colic for the past fifteen years, the intervals growing gradually shorter and the paroxysms severer. For the last twelve months the attacks have been coming on once or twice weekly till the last few weeks previous to my treatment when not a day passed without one or more attacks, and her favorite remedies —hot applications and emetics (usually the finger)—which had always given relief before now failed completely. I was called during a prolonged and severe attack. Gave morphia hypodermically and repeated as often as necessary to control pain. Then followed the usual remedies without any good result. Called the second evening and found patient still suffering, quieted her as before and gave six ounces of olive oil at a single draught.

Left patient perfectly easy with directions to take a brisk cathartic the following morning and examine the discharges closely. She did so, and the husband reported that at least fifty calculi had passed varying from the size of a wheat grain to that of a large pea, pale-yellow and easily mashed. Patient enjoyed a light breakfast, said she felt like a new woman. Several weeks have elapsed since and not even a symptom of colic has been felt. Patient thinks that she is now entirely cured. Should the symptoms of colic reappear I will repeat the oil. Without this Journal my patient would still be suffering and I would be too ignorant to cure her.

S. T. Turner, M.D.

Arcola, Va., April 1st, 1881.

Prof. E. S. Gaillard, New York:

Dear Doctor:—Among your "selections"

appeared an article on the use of "Large Doses of Olive Oil for Softening and Expelling Biliary Calculi," to which you append a note requesting a fair trial and reports of the results of this treatment. In answer to this a contributor in your number for March 26th, informs us that he has employed olive oil in three cases with success—all he met with—and that he derived his knowledge of its virtues from another practitioner who pronounces it nothing new, but an old *eclectic* remedy.

An eloquent medical writer has said that the paths of therapeutics are cumbered with the wrecks of fallacious conclusions; may I be pardoned if I suggest that *this* is one of them? May not these concretions, which were removed in such astonishing numbers by this infallible *vis a tergo*, be simply balls of impacted, condensed fat or oily matter such as are sometimes found in cases of "fatty diarrhœa"? In other words are not these supposed gall stones not only cured but also caused by the reputed remedy.

The view I am inclined to take readily explains the invariable and inevitable efficacy of sweet oil, of which the author of the article alluded to declares: "I have during the past year used it in a variety of cases and always with complete success—in every instance where the biliary calculi were proved or presumed to have been the cause of periodic suffering. A medicine which cures not only all cases of gall stones but even all those merely presumed to be such has truly, as he remarks, "hitherto been a desideratum."

If your correspondent has a taste for delving in the musty records of the past, and will refer to Prof. Dunglison's Practice, published as far back as 1842, he may read of a case in which this treatment was practised.

Yours respectfully,

S. H. Kaighn, M.D.

Note—The repudiation of the good effects of the olive oil in the many cases now reported, and on the reasons given by the author of this letter does not seem to be just—Ed.

Demings Bridge,
Matagorda Co., Texas,
March, 28th, 1881.

Dr. E. S. Gaillard:

Dear Sir:—In reply to H. A. T——'s remarks, in the Number for March 12th, 1881, referring to the enlargment of the spleen, I would say that in the last few cases I have treated, I have pursued the plan recommended by W. C. Maclean, M. D., on page 364, vol. I, *Reynolds System of Medicine*, as follows:

'We have a powerful remedy in the ointment of the biniodide of mercury, applied over the gland. The experience of many practitioners in India having demonstrated the extraordinary efficacy of this remedy in cases of goitre, it has of late years been successfully used in some parts of India as a remedy in solid enlargements of the spleen."

"When used in goitre, a portion about the size of a nutmeg is applied over the swelling with a smooth spatula, the patient is directed to expose his goitre to the sun rays as long as he can bear the smarting which quickly follows. A second application is immediately made, and it rarely happens that any further treatment is necessary."

"Within the last six months we have been very successful in the R. V. Hospital, Netley, in treating enlarged malarial spleens and livers with this ointment. I have pursued the same plan, substituting the heat of fire for that of an Indian sun. In some cases, where the spleen has extended down into the pelvis, it has after several applications, been reduced almost to its normal limits; and in only a few cases has it failed to reduce the size of the organ most signally. It has acted just as energetically on enlarged malarial livers."

In conjunction I have given Iron, Quinine, Nitric Acid, and the Salts of potash, and have, as yet, in no case failed.

Yours truly,

A. M. Pelton, M.D.

Maryville, Tennessee,
March 3d, 1881.

Prof. E. S. Gaillard, M.D.:

Dear Doctor :—I will report the following for your Journal: Mr. G., aged 35 occupation farmer, had been treated by two physicians for six weeks in the Spring of 1877 for *acute rheumatism*, but the treatment had not relieved the case. Found the joints and sheaths of some of the muscles in a high state of inflammation, with some effusion in the synovial membranes, with pain in the pericardiac region, with palpitation, and great oppression, with some effusion in the pericardium. Pulse, 110°; temperature, 104°; a bad case and immediate relief must be had or the patient must die. Prescribed the following: Salicylic acid, one drachm; Bi-carb. sod, one drachm; make 9 powders Sig. Give one every three hours dissolved in one-fourth of a glass water. In thirty-six hours from the first dose, ordered Hyd. chld. mit., gr. xx; Doveri powder, gr. xx; Sulph. quinine, gr. x. M. Make 2 powders Sig. One every 12 hours in syrup or sugar.

This operated well. Pulse, 90°; temperature, 99°. After this the patient was put on Tr. Ferri Chld., gtt. xx three times a day before meals. Diet light, allowed the patient plenty of cold water during the entire treatment. The patient was well in three months and has remained so until now.

For acute rheumatism in its incipiency I have found nothing better than

Salicylic Acid,	4 parts.
Bi-Carb. Sod,	4 "
Tr. Gentian,	2 "
Aquæ,	8 "
Syrup Simplex	4 "

I frequently give ten to twenty grains of the acid at a dose and never had any bad results from it. In *chronic rheumatism* I use the acid and *salicine* in equal parts, in capsules or water enough to dissolve, one hour after meals; Tr. Ferri-Chld., before meals and have had good results from this in a number of cases. While every case must be treated on its own *merits* or the physical condition that the physician finds his cases in must govern the treatment so far as medicines are indicated, a judicious medication is a good thing. But the world is full of humbugery and the people in part have gone wild after it, for nothing but medicine will satisfy some people. I am, respectfully, &c.,

John Blankenship, M.D.

MEDICAL CONFESSIONAL.

Peccavi.

Decatur, Miss.,
April 20th, 1881.

Dear Sir :—I believe the department termed "the Confessional" to be one of the most important and useful to the Profession. I therefore contribute the following case, which I am sure will do good:

Was called in December last to see Mrs. G. W., on account of severe pain and fever which it was alleged had existed for twelve hours. On my arrival I found that she had been suffering from persistent leucorrhœa for many months, and had for relief been using a strong solution of alum in water by vaginal injection. She had derived benefit from this course of treatment, and had not experienced any trouble from it. But on the day before, while using the Davidson syringe a little more forcibly than usual, she experienced a sharp and overwhelming pain in the lower portion of the abdomen. This slowly increased, with great nervous depression, and cold damp skin. She had during the hour several convulsive twitchings, and these symptoms were followed by high reactionary fever, with increased pain. It was in this condition that I found her.

She was evidently suffering at the time of my visit with a decided metro-peritonitis, and this continued under the usual treatment for eight days. At the end of that time she was gradually relieved and made a good recovery. She was treated, as usual, by the free use of opium and quinine, with emollient warm applications over the abdomen; milk diet, and absolute rest.

On examining the syringe used, it was evident, from the large central orifice in the nozzle, that cold water had entered the uterus and perhaps even the fallopian tubes. At any rate, the severe, sudden colic, with the subsequent symptoms were unquestionably due to the entrance of cold water into the uterine cavity.

While I did not direct this treatment, and while I do not believe I would be justifiable in giving the name of the physician who did, I think it best to call attention to the error of advising the use of such injections, and the danger of their use, unless the patient be directed to remain in the recumbent or semi-recumbent posture during the operation; and to close permanently the central orifice in the nozzle of the syringe used. The practice of sitting on a commode, or upon the chamber vessel, during the administration of a vaginal injection is not only a bad one, but a dangerous one, and the confession of this error (through me) of a brother practitioner will, I hope, be useful to each reader of your Journal.

Truly yours.

R. W. SAVAGE.

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REVIEWS.

"Judex damnatur cum nocens absolvitur."

MINOR SURGICAL GYNÆCOLOGY. A Manual of Uterine Diagnosis and of the Lesser Technicalities of Gynæcological Practice for the Use of the Advanced Student and General Practitioner. By PAUL F. MUNDÉ, M.D. New York. Wood & Co.

While there are many excellent American works on gynæcology which offer to the experienced specialist and operator most of the information which is at at present before the Public, there are none which furnish those carefully described details so much desired by those whose experience has been limited, and who are yet called upon to do the varied gynæcological work of a general practice. To this class the work of Dr. Mundé will be highly welcome while even to the most distinguished it will be useful and acceptable. There is nothing so much valued by every one who, with a limited special experience, has to perform work which demands thoroughness and skill, as a volume in which the author (recognising this fact) goes with patient elaboration into the description of all absolute and collateral details. The author of this volume has done most excellent service in this connection, and he will beyond all doubt reap a merited and full reward.

There is another characteristic of his work which demands especial notice, and it is that in describing the varied and manifold instruments of "the craft" the author gives their disadvantages as well as their advantages, and states, in connection with most operations, the inconveniences and accidents which are liable to be presented, with judicious instructions as to the manner in which these should be met and treated. The general practitioner will especially value these features of this excellent volume.

The work is divided very naturally into two parts; in part first there is given the different methods of examination, verbal and instrumental, etc.; in part second there is presented "the minor gynæcological manipulations and applications." The sections devoted to tamponing, pessaries, massage, hypodermic injections, etc., are especially practical and valuable; and the article on artificial impregnation, that is how, in the amusing if questionable language of Bowling of Tennessee, a baby may be "the son of a gun" will be read with interest and pleasure.

The book is well and profusely illustrated and is one of the very best of the Wood series.

TRANSACTIONS OF THE MEDICAL SOCIETY OF VIRGINIA. Danville. October, 1880.

This volume is well issued and will be found very interesting. The paper on The Practical Bearing of Recent Advances in Cerebral Localization and Cerebral Thermometry by Dr. C. Dabney of Charlottesville, with diagrams is very instructive and profitable. Dr. C. B. Cullen offers some very practical deductions in his article on new remedies. Those interested in the subject of hepatic abscesses will find the paper of Dr. G. W. Semple instructive and practical. The address of Dr. Henry Latham the President is excellent and states many bad conditions affecting the prosperity of the Virginia Profession which could be removed by timely legislation. The volume is a credit to the Body from which it emanates.

TRANSACTIONS OF THE SOUTH CAROLINA MEDICAL ASSOCIATION. 1880.

This volume is issued with unusual care. The leading paper is the address of the President Dr. F. M. Robertson. It is a strong and instructive attack on the modern views of evolution. He quotes from Darwin to show that this distinguished leader admits the speculative and perhaps erroneous deductions made by himself. Dr. Robertson declares Darwin's Descent of Man to be "beyond the pale of Scientific Productions." The paper by Dr. Thomas Legaré on the treatment of Epileptiform Convulsions by the hypodermic injections of atropia is practical and interesting.

The volume contains much useful statistical information from the State Board of Health.

DIAGRAMS OF THE NERVES OF THE HUMAN BODY. By WILLIAM HENRY FLOWER, F.R.S. Third Edition. Six Plates. Presley Blakiston & Co., Philadelphia. 1881.

The first edition (1860) of this work stamped it as one of high character. The present edition is made smaller to place it within the means of all. As a *multum in parvo* it will be highly prized and receive a deserved and abundant support. It is just what every physician desires; an able and masterly exhibit of the nerves of the human body.

IMPERFECT HEARING AND THE HYGIENE OF THE EAR. By LAURENCE TURNBULL, M.D. Third Edition. 8vo. pp. 147. J. B. Lippincott & Co., Philadelphia. 1881.

The general practitioner must know something of these subjects, and is often anxious to secure a convenient and simple method of deriving needed information in regard to them. This book will be found to supply such a want, concisely and efficiently.

CLINICAL LECTURES ON THE PHYSIOLOGY, PATHOLOGY AND TREATMENT OF SYPHILIS, TOGETHER WITH A FASCICULUS OF CLASS-ROOM LESSONS, COVERING THE INITIATORY PERIOD. By FESSENDEN N. OTIS, M.D., Clinical Professor of Genito Urinary Diseases, College of Physicians and Surgeons, New York, etc. New York. G. P. Putnam's Sons. 1881. 8vo. Pp. 116-xvi. Cloth. Price, $1.50.

Though most of the matter included in this volume appeared originally in the Boston *Medical and Surgical Journal*, it bears evidence of revision and elaboration. The author is a thoroughly definite dualist in syphilitic pathology. He repudiates too all possible similarity in chancre and chancroid, either in local or constitutional manifestations. Chancroid he regards as a strictly local disease. His effort to establish both a physiological and pathological chain of connection between the primary lesion and the varied manifestations of constitutional taint is very able and thorough; it is the best before the Public, and gives a permanent value to his work. The treatment advocated is manifestly based on the results of this study; while there are yet evidences of the fact that his treatment is also based on the results of a large clinical experience. The rationale of the treatment in the primary and secondary stages is very well given and the work will be found therefore instructive to beginners, as well as interesting and suggestive to advanced readers and practitioners. It is a volume which every one will find a valuable addition to the library.

HOW TO USE THE FORCEPS. By HENRY G. LANDIS, A.M., M.D., Professor of Obstetrics and Diseases of Children in Starling Medical College, Ohio. Translated. E. B. Treat & Co., 757 Broadway, New York.

While the author has not increased the knowledge of the subjects treated, he has unquestionably facilitated its methods of acquirement. His explanations are especially useful and happy in illustrating the anatomy of the pelvis, and the mechanism of delivery. While Hodge and Naegle have made the whole subject of the positions of the child and the mechanics of delivery lucid and thoroughly intelligible, doing indeed more than all of their predecessors and contemporaries, it can not be denied that the author of this work has made many relative points more easily and absolutely comprehensible.

He opposes the latest views of Barnes in advocacy of the to-and-fro motion in traction with the forceps, and is, in this respect, a thorough endorser of the methods so ably advocated by Dr. Albert Smith of Philadelphia. The author prefers the Davis forceps, made by Gemrig of Philadelphia, though it must be stated that in this respect such is not the choice of the best obstetricians; who prefer a lighter and less clumsy instrument. The arrangement of the book is practical and good; he first discusses the mechanism of labor, and then devotes the remainder of the volume to the examination of the forceps and how to use them. The book is very worthy of attention and study.

ON CERTAIN CONDITIONS OF NERVOUS DERANGEMENT. By W. A. HAMMOND, M.D. Surgeon General U. S. A. (Retired List), etc., etc. New York: G. P. Putnam's Sons. 1881.

This book contains much of the matter originally issued in the author's work on Spiritualism, which is now out of print. The subject of spiritualism is however omitted in this volume, and the author devotes himself chiefly to the discussion of the following psychological conditions, viz.: certain conditions of nervous derangement; phases of hysteria; fasting girls; catalepsy; ectstacy and hystero-epilepsy; stigmatization; supernatural cures; some of the causes which lead to sensorial deception and delusional beliefs, etc.

The questions presented are as interesting to the secular, as they are to the professional reader, and the author has so discussed them, that they are equally intelligible to both classes of readers. It is a volume which will be found both interesting and instructive. It is neatly issued.

THE STUDENTS' MANUAL OF HISTOLOGY, FOR THE USE OF STUDENTS, PRACTITIONERS, AND MICROSCOPISTS. By CHARLES H. STOWELL, M.D., Assistant Professor of Physiology and Histology at the University of Michigan. Detroit: George S. Davis. 1881.

This little work is profusely illustrated and if the cuts were more carefully executed such a feature would be welcomed, but however acceptable illustrations are, unless the impression be clean, clear and sharp, the eye is offended by their introduction. The paper and press work are better, and the book is presented in a very creditable and attractive form.

It is intended to be something more than a manual, and yet it is too small to be accepted even as a primary treatise. The histological statements, which are intended to form the basis of the work, are not as correct as one would have expected from such a source. The capillaries, it is claimed have an elastic coat, while in reality it is the disappearance of this tissue which marks the line of demarcation between the capillaries and the arterioles. The author says that "they do not diminish or increase in size," and yet, says on the next page, "if they become distended, openings appear which may become enlarged into stomata." The fact is that stomata exist physiologically in most capillaries, and that these vessels enlarge whenever congestion occurs, and diminish whenever this congestion is relieved.

The author confounds the lacunæ of bone with bone corpuscles; a very marked histological blunder. His histological acceptance of the teachings of Cohnheim is believed to be correct, but the evidence so far does not warrant their being put forth, in a scientific work as absolute facts.

The author is unquestionably well read in histology, but he writes unguardedly, and at times very carelessly. The book needs revision and will yet become valuable.

A Manual of the Practice of Medicine, designed for the Use of Students and the General Practitioner. By Henry C. Moir, M.D. New York. 1881.

This book is a compilation. The authorities chiefly presented are Niemeyer, Roberts, Loomis, Da Costa, Bristowe and Hartshorne. An excellent group, but unfortunately one whose members have their works in most medical libraries. As an epitome, the labor of compression is very marked; so much so that at times the views presented bear about the same relation to the views of the original writers, that chronology bears to history. Fact upon fact, without descriptive connection or explanation.

Strange as it may seem, there are always many who are too lazy to read works as prepared by their authors, and who prefer to take the skeleton as a substitute for the original body. To all such, this book will be very welcome. It will be equally welcome to the student who is cramming for the final examination, and it may be to that apparently ominpresent individual the busy practitioner; he who is so busy that (unlike Trousseau and Velpeau and Syme and Simpson and Graefe and a host of giants who did a herculean practice, and yet not only studied but wrote voluminously) he can not even "find time to read."

The author has appended for the host who can not write prescriptions, but prefer to buy those of others, (who have not seen their patients), several hundred formulas. This class of practitioners will find something in this lot to suit every taste, if not every phase of the diseases treated. The prescriptions given have been carefully selected.

The style of the writer is often inelegant and at times grossly incorrect. Among many sentences which could be given in evidence of this fact, the following is a very fair specimen: "This volume has been designed chiefly to aid the medical practitioner and student in refreshing the pathology, etiology, symptomatology, differential diagnosis and treatment of the more important diseases." When "the practitioner and student" was ever engaged in such work, medical history fails to reveal.

Such books (and they come now from the press as prodigally as does the spawn from the Spring shad) do more harm than good. It is believed that fair criticism may check the evil, and thus benefit both the public and a class of authors who really do nothing more than a species of clerical work, inferior even to that of many routine clerks in the various departments of the Government.

In writing thus plainly, the position maintained is one of kindness to those who undertake this species of authorship; this vicarious labor, which is unjust not only to the original or real authors, but to the Public; and most of all to those who assuming to be authors are after all but indifferent clerks. Mince pies are good in the dining room, but no one wishes to have them in the library.

BOOKS AND PAMPHLETS RECEIVED.

First Biennial Report of the North Carolina Board of Health, 1879–1880. Raleigh. 1881.

Hydrophobia. A Monograph for the Profession and the Public. D. G. Brinton, M.D., Philadelphia, Pa. 1881. Price, $1.00.

The Digestion and Assimilation of Fat in the Human Body. By H. Critchett Bartlett, Ph.D.F.C.S. London, Eng.

Consumption and Wasting Diseases. Successfully Treated by "Hydrated Oil." By G. Oberend Dewry, M.D., M.R. C.S. London, England.

Croup and Tracheotomy in the Southern States. By William M. Mastin, M.D., Mobile, Ala. 1881.

A Practical Treatise on Nasal Catarrh. By Beverley Robinson, A.M., M.D. Paris. Wm. Wood & Co. 1880.

Opinion of the Medical Profession on the Condition and Needs of the City of New York. In regard to Street Cleaning. April 13th, 1881.

Photographic Illustrations of Cutaneous Syphilis. By George Henry Fox, A, M., M.D. Nos. 4, 5, 6. E. B. Treat. New York. 1881.

On the Antagonism Between Medicines and Between Remedies and Diseases. Being the Cartwright Lectures for the Year 1880. By Robert Bartholow, M. A., M. D., LL.D. Philadelphia. D. Appleton & Co. New York. 1881. $1.25.

Transactions American Medical Association. 1880.

Lectures on the Diseases of the Nervous System, Specially in Women. By S. Weir Mitchell, M.D. Philadelphia. H. C. Lea's Son & Co. 1881.

Pathology and Morbid Anatomy. By T. Henry Green, M.D. London. Henry C. Lea's Sons & Co. 1881.

A Manual of the Practice of Medicine. By Henry C. Moir, M.D. New York. 1881. Steam Press of the Industrial School, H. O. A.

The Student's Manual of Histology for the use of Students, Practitioners and Microscopists. By Chas. H. Stowell, M.D., of the University of Michigan. Geo. S. Davis. Detroit, Mich. 1881.

Mr. Perkins' Daughter. By the Marchioness Clara Lanza. G. P. Putnam's Sons. 1881.

A Treatise on Bright's Disease and Diabetes. With especial Reference to Pathology and Therapeutics. By James Tyson, A.M., M.D. Lindsay & Blakiston. Philadelphia. 1881. $3.50.

Annual Report of the Board of Regents of the Smithsonian Institution. For the Year 1879. Government Printing Office. Washington. 1880.

The Students' Manual of Histology, for the Use of Students, Practitioners, and Microscopists. By Charles H. Stowell, M. D. Detroit: George S. Davis, Publisher. 1881.

Eighth Biennial Report of the Trustees, Superintendent, and Treasurer of the Illinois Asylum for Feeble-Minded Children at Lincoln. October 1. 1881.

The Diagnosis of Diseases of the Spinal Cord. An Address delivered to the Medical Society of Wolverhampton, October 9. 1879. By W. R Gowers, M. D., F. R. C. P , etc., etc. With Additions and Illustrations. Second edition. Philadelphia: Presley Blakiston. 1881. (From A. Williams & Co.)

United States Marine Hospital Service. Report on Trichinæ and Trichinosis. Prepared under Direction of the Supervising Surgeon-General, by W. C. W. Glazier, M. D., Assistant Surgeon Marine Hospital Service. Published by order of Congress.

List of Members of the American Academy of Medicine, January, 1881.

Valedictory Address to the Twenty-Ninth Graduating Class of the Woman's Medical College of Pennsylvania. By Rachel L. Bodley, M. D.

Ninety-Eighth Annual Catalogue of the Medical School (Boston) of Harvard Universary, 1880-81.

First Biennial Report of the North Carolina Board of Health, 1879-80.

Trance and the Trancoidal States By George M. Beard. W. L. Hyde & Co. N. Y. 1881.

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TRANSLATIONS.

"Ubi mel ibi apes."

Malignant Pustule. Its Anatomy and Pathological Physiology. By DR. A. GASSOT. Translated from *Le Concours Medical*, May 1st,

The anatomo-pathological study of malignant pustule should relate to two different kinds of lesion which can frequently be found together, when, for instance, the patient has succumbed to the progress of the disease. One of these, however, can be quite ineffectual if the general infection has not yet begun, and if the morbid process has been arrested in the cutaneous layers. In one word we must distinguish the local lesions from the general lesions produced by the extension of the virulent infection and terminating in death.

The form of local lesion most frequently observed is, as we know, malignant pustule; the necessary condition for its production is the introduction of malignant virus into the cutaneous layers. The progress of the disease is necessarily lessened in these tissues which are hardly nourished except by imbibition, and the lesion remains for a long time localized. Malignant pustule in all these respects, merits a particular description, and we will, therefore, commence with it.

There are many varieties of malignant pustule to be met with; this fact will not be surprising when we remember that the form of the local lesion as well as the rapidity of its evolution depends essentially and solely upon the anatomical structure of the part wherein the infection is situated. This axiom of pathological anatomy will help us to explain the differences which the lesions of malignant œdema present to us.

The local lesion of a malignant infection consists in the production of a vesicle containing a liquid slightly colored generally speaking, accompanied by a sub-vesicular ecchymosis and the induration of the underlying tissues. The phenomena of concurrent heat, redness, peripheric œdema, etc., are merely signs of inflammatory reaction.

It may be, moreover, that there exists on the part of the bacteridia a phlogistic matter to which we must attribute these inflammatory phenomena. (Toussaint).

This vesicle does not appear until a certain time has transpired; the bacteridia must be installed in the contaminated tissues, and multiply in a sufficient quantity to determine the local inflammation. The latter in the beginning proceeds in the manner common to all vesicular dermatoids, a slight redness preceeded by a small pimple hardly projecting at all, round, firm and no trace of either cavity or liquid; it is in fact nothing but a pimple. Then follows the exudation of a watery liquid which imbibes the inner layers of the epidermis, disunites its elements and finally arriving beneath the superficial layer which is more resisting, raises it up and thus transforms the pimple into a vesicle.

At the same time the underlying mucous becoming inflamed, the capillaries distend, break and allow bloody globules to escape (sub-vesicular ecchymosis) while the intervening exudation determines the induration.

So far, we have only the normal *ensemble* of the inflammatory phenomena localised upon one point, and the process of the disease would presumably follow its habitual course, if an accident, due in all probability to the bacteridia was not produced. These latter make the capillaries form a veritable embolus and binding up the small arteries determine the termination by gangrene.

Moreover, when the seat of the infection is once established, it spreads, new vesicles group themselves in a circle about the center one, and these repeating the primitive lesions will be accompanied by sub-vesicular ecchymosis, and induration of the underlying tissues, etc. These secondary vesicles propagate the infection and more vesicles still are likely to appear, so that the vesicular zone will constantly increase in dimensions while the central portion, which is fatal, will have the appearance of a gangrenous scar which likewise will have a tendency to increase from the centre towards the periphery.

Also, the capillary and veinous obliteration will determine the production of a sub-cutaneous œdema, more and more extended and more considerable in proportion, as the cellular tissue is softer and more abundant.

This chain of local phenomena we must hasten to say, is not always to be observed in the regular and successive manner which we have just described. When the morbid alterations gain in depth, general infection takes place, and the rapidty of its course does not give the local lesions any time to submit to their evolutions.

The incision of malignant pustule permits me to give an account of these diverse modifications. The sub-vesicular tissue is hard; it resists the lancet and when pierced only produces a few drops of reddish water; the hardness diminishes deeper, and a black fluid blood appears; finally, the œdematous cellular tissue presents a gelatinous appearance and consistency which we may compare to slices of lemon.

If the local lesion is more spread we find first of all a grayish scar, fœtid and soft, then underneath a thick layer of the same hard consistency that we have mentioned above.

At the same time the sharp pain occasioned generally by the incision, grows milder and in course of very little time we frequently find complete insensibility.

In case the local lesions (in consequence of the general infection being retarded) can undergo all their evolution we can observe gangrene invade successively the entire skin, the subcutaneous and intermuscular cellular tissue, and even the muscles. Around the scar the cellular tissue, which is ot a reddish brown color, is infiltrated by a red, watery fœtid liquid; it is soft, pulpy and sometimes contains gases produced from the putridity. According to Gubler, these gases consist in great proportion of proto-carbolized hydrogen.

In the various liquids which flow from a malignant pustule when an incision is made (blood, watery matter, etc.) the microscope plainly reveals bacteridia. We will return, however, to the alterations in the blood in regard to the general lesions confirmed during the autopsy.

Instead of being deposited in the cutaneous layers the virus may have gone deeper into the cellular tissue for instance, the zones of characteristic phlyctenæ will not be produced around a primitive vesicle; the nature and aspect of the lesions will change with that of the tissues around which they evolve.

A malignant œdema will be produced. These are the tumors which are so frequently found in horses afflicted with malignant disease.

The anatomical lesions are the same as those previously described in regard to the cellular tissue only, as the general infection is much more rapid than in malignant pustule; the local phenomena cannot undergo their entire evolution. At times, however, the skin will be invaded and phlyctenæ observed, but they never present the special disposition of malignant pustule. They are generally filled with a brown watery matter and rest upon a livid foundation, which is a sign of imminent or actual sphacelus of the tissues.

Malignant œdema may, however, be produced by another mechanism in the neighboring regions of the mucous. When this occurs identical phenomena to those we have already mentioned in regard to malignant pustule take place; the œdema is secondary, and has no particular character by reason of the structure of the part and the frequent impossibility of observing the primitive lesion.

We cannot indeed observe malignant pustule upon mucous. The initial vesicle is produced in reality, lest the rapid fall of the epithelium and the peculiar characteristics which the local lesion offers, cause it to differ to such an extent from the exterior cutaneous form that for a long time, it was taken for one of the general lesions of spontaneous malignant fever.

A more attentive observation and M. Pasteur's experiments have done justice since to this error. A lesion of the mucous is to malignant pustule what enanthema is to exanthema in certain eruptive fevers. We find a round ulceration sometimes surrounded by an epithelial decollation, always situated upon a black ecchymotic lamina which is more or less infiltrated.

Nothing, undoubtedly, in a similar lesion could authorize us to affirm that it is at this point that the virus penetrates the economy, if the alteration ot the corresponding lymphatic ganglia did not serve to remove all doubt; we could not, indeed, rely upon any local morbid evolution; the rapidity oi the general infection delays necessarily its progress and does not give the ultimate phenomena an opportunity to present themselves.

We must thank M. Collin for the knowledge we possess concerning the course taken by malignant infection in the period of incubation which procedes the appearance of symptoms of general intoxication.

He has demonstrated with the patience and skill for which all his physiological researches are remarkable, that the lymphatic ganglia are the first organs to be affected by the virulence after the virus has once penetrated a certain part of the organism, and also that these ganglia become virulent in a successive manner, according to the order in which they are situated in regard to the lymphatics preceeding from the points of inoculation.

These facts which can be reproduced by experiments, and whose absolute exactness could not be doubted, permit us to go as far as the departure of the virulent infection in an autopsy and have led us to the lesion of the mucous.

The ulterior progress of malignant infection has also been determined by M. Collin. After having demonstrated that the ganglia corresponding to the point of inoculation were the first to be attacked, and that the virulence made itself apparent in a successive manner as heretofore described, he showed that these ganglia transform themselves into virulent channels, so to speak, at once by deposit and regeneration of the malignant virus in their tissue, or in the liquids with which they are impregnated. That, during a certain time they, together with the incision and its œdema are the only portions of the economy which possess virulent properties; that being the receptacles and regenerators of the virus they are the active means during the incubation, and even until the final period of the disease is reached; that their activity is betrayed by the tumefaction, the œdema, the red coloration, the intervening hæmorrhage, in one word by a specific irritation, by new properties, and the development of bacteridia; that finally they are (with the incision and its peripheric infiltration) the channels from which the general infection of the economy proceeds.

It is easy to understand, therefore, why malignant pustule is always accompanied by reddish tracks following the course of the lymphatics, also why the ganglia are choked up and become painful, and how, finally, when the general infection begins it takes such rapid strides and announces its presence by lesions in nearly all the viscera.

Let us pass on to the study of such general alterations as the autopsy reveals.

Exterior character—The body has a manifest tendency to putrefaction, the depending portions become infiltrated; the abdomen is distended; the subcutaneous cellular tissue develops gases which raise up and project the skin at divers points, notably, however, where it is thin; violet-colored marble-looking spots are visible, giving the parts the appearance of having received violent contusions. An infectious odor attracts winged insects.

The Tissues—The various tissues are filled with a watery matter sometimes lemon-colored, and then again of a dark brown hue. Their consistency is diminished, and the normal adherents singularly relaxed. Their color, independent of the bloody suffusions, is modified and the new hue which they borrow from the coloring matter of the blood proceeding from the globules is not lessened in any way by washing; but neither pus nor traces of any phlegmatic action are to be found any where.

Circulatory Apparatus—Blood—all the vessels are filled with blood which is black, thick, sticky, and fluid and which colors the hands and all foreign bodies a reddish brown. The fibrine is sensibly diminished; the jagged globules allow their colored matter to escape and separate in the serum.

These alterations explain the fluidity and the incoagulability of the liquid, and also the formation of the dark spots, the sanguinary effusions and the colored watery infiltrations.

The characteristic alteration, however, consists in the presence of a microscopic organism discovered by Daraine, and called bacteridium. In the chapter devoted to the genesis and etiology of malignant pustule we have demonstrated the part played by this amimalcule; now let us consider its proper characteristics.

The bacteridia present themselves under the form of small rods, very pliable, simple, united, of an equal diameter from one end to the other, transparent and with a square opening at each extremity. They never move. Their number is considerable and is in direct proportion to the intensity of the general infection. They resist the action of water, alkalies and acids, but putrefaction causes them to disappear rapidly.

They are preserved intact in dessicated blood and resist cold no matter how intense it may be. Heat, however, as we have seen, destroys them; at 44° they are incapable of developing. Agents designated as antiseptic, kill them when they are found in virulent liquid in sufficient proportion, but at the same time a small quantity obstructs their development, and this fact is of great importance from a therapeutic point of view.

Thc bacteridium is essentially æriform; oxygen is necessary in order that it may live, and it developes at the expense of the oxygen contained in the blood. It brings forcibly into the vital fluid modifications which are incompatible with life.

Bollinger states that death is due to certain bacteridian embolies; but we do not share his opinion. Pasteur invokes asphyxial phenomena due to toxæmia, and Collin the alteration of the blood in its *ensemble*. It is difficult to pronounce an opinion between these two rivals, and it is probable that both are right; anaxæmia determined by bacteridia constituting one of the principal lesions of the sanguinary fluid, but not being the only one to be met with.

We find in the vessels a few clots of no consistency formed from agglomerated globules and bacteridia, but we do not find any characteristic lesions of the embolus. The lesions are the same everywhere; if any obturation of the vessels exists it is in the capillaries and not in the vessels of a certain calibre as it happens in embolus.

These vessels moreover are gorged with black fluid blood, and this alteration is to be found in all the organs, brain, liver, kidneys, etc.

The lymphatic system is no less affected, the ganglia are swollen, soft and friable; they are ecchymosed and filled with a watery sanguinary fluid which recalls that of the local lesions.

The lymphatic vessels are distended and the liquid they contain is thick and red; bacteridia are found in them but never purulent globules.

Watery cavities—Pericardium, peritonæum and pleura contain watery matter, sometimes yellowish and sometimes of a deeper color. When the œdematous swelling invades the chest the mediastinum is infiltrated. It is the same with the epiploon.

Digestive tube.—This is the seat of insterstitial hæmorrhages, the mucous is highly colored, particularly in the depending parts; it becomes detached with the greatest facility from the subjacent tunics which are always more or less infiltrated. The vessels are distended and gorged with blood.

The spleen doubles or triples in volume; its exterior surface is livid; it suddenly ejects the noncoagulated blood which fills it in the form of black milk. If you press or wash the spleenic tissue you can easily remove all the infectious putrefied matter which it contains, and expose the fibrous ground work of the organ which remains of a deep red color.

The liver and kidneys are softened and are easily torn. Their volume becomes increased, and they present the alterations which we have already mentioned in regard to the other organs.

We see, therefore, that the lesions are the same every where, interstitial hæmorrhage and œdematous infiltration. The apparent modifications only relate absolutely to nature and the structure of the organ. The theory formed by M. Collin confirms the fact that the lymphatic ganglia successively taken are the propagatory organs of malignant infection, and that once invaded they comport themselves just like any other distinct and proper channels. It is indeed easy to conceive that each channel reproduces the primitive lesions, and that consequently in an autopsy we can only find these lesions with their appertaining characteristics.

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CHEMISTRY.

"Diruit ædificat, mutat."—Hor.

A Most Complete Hypodermic Case is now for sale by John Wyeth & Bro., Manufacturing Chemists, Philadelphia, Pa. It is a small box three inches long, by two wide, and one thick. This contains ten small phials, and each phial contains twenty compressed tablets for hypodermic use. The tablets consist of morphia, or morphia and atropia; each combined with sulphate of soda. The tablets are so diversified that a tablet contains morphia gr. ⅛; gr. ¼; gr. ⅓; gr. ½; or if preferred tablets may be ordered containing morphia and atropia in any combination.

For use it is only necessary to dissolve one tablet in water, and the solution is ready for hypodermic use.

Sanitary Rules for Public Buildings—The following rules, to be observed in the construction of all buildings erected under her Majesty's Office of Works, have been prepared and issued by the Secretary to the Office of Works:

1. All water-closets and urinals shall be constructed so that one wall at least of such closets and urinals shall be an outer wall of the building.

2. All soil pipes shall be carried outside the building, and ventilated by means of pipes leading the foul gases above the highest point of the building. Such pipes to be carried to points removed from chimney stacks.

3. Separate cisterns shall be constructed for the water-closets and for the general purposes of the building. No tap or "draw-off" shall be affixed to any pipe communicating with a cistern supplying a water-closet or urinal.

4. All waste pipes and overflow pipes of cisterns shall terminate in the open air, and be cut off from all direct communication with drains.

5. Great attention shall be paid to insuring thorough ventilation in all rooms. Rooms so high that their ceilings shall be more than two feet above the top of the windows, corridors, staircases and other open spaces shall be specially ventilated so as to prevent the accumulation of stagnant air.

6. All main drains should, where practicable, be formed outside the building. In the event of its being necessary to carry a main drain underneath a building, it must be trapped immediately outside the main wall, and a ventilating pipe must be carried from that point to the highest part of the roof, as under rule 2.—*Jour. Soc. Arts.*

Emulsion of Codliver Oil.

Codliver oil, . .	4 ounces.
Essential oil of almonds,	4 minims.
Powdered gum acacia,	1 ounce.
Syrup, . . .	1 "
Water, . . .	to 8 ounces.

Mix the gum with the oil, then place on the mixture 2 ounces of water and stir till the emulsion is formed, then add the remainder, water, essence and syrup.

Emulsion of Castor Oil.

Castor oil, . .	4 drachms.
Powdered gum acacia,	80 grains.
Essential oil of almond,	1 minim.
Simple syrup, . .	2 drachms.
Water, . . .	to 2 ounces.

Mix the powder with the oil, then add 2 drachms of water and stir till the emulsion is formed, add the remainder, water, syrup and essence.

Emulsion of Turpentine Oil.

Oil of turpentine, .	4 drachms.
Powdered gum acacia,	2 "
Syrup, . . .	2 "
Water, . .	to 2 ounces.

Mix the powder with the oil, add ½ ounce of water and stir till the emulsion is formed, then add the remainder of the water and syrup.

Oil of turpentine is considered one of the most troublesome bodies to emulsify; prepared by this form there is no difficulty.

Emulsion of Balsam Copaiba.

Balsam of copaiba, .	3 drachms.
Powered gum acacia,	3 "
Simple syrup, . .	6 "
Water, . .	to 6 ounces.

Mix the powder with the balsam and add 6 drachms of water, then stir till the emulsion is formed, gradually add the remainder of the water and syrup.

Emulsion of Resin of Copaiba.

Resin of copaiba, .	2 drachms.
Rectified spirit, .	4 "
Powdered gum acacia,	4 "
Water, . .	to 6 ounces.

Dissolve the resin in the spirit, add the powdered gum and mix well, add now an ounce of water, stirring till the emulsion is formed; make up to 6 ounces with water.

Emulsion of Balsam of Peru.

Balsam of Peru, .	3 drachms.
Powdered gum acacia,	2 "
Simple syrup, .	6 "
Water, . . .	to 6 ounces.

Rub the powder well with the balsam, add 3 drachms of water and mix till the emulsion is perfect, them add the remaining water and syrup.—*Pharm. Jour. and Trans.*

ELIXIR PROTOCHLORIDE OF IRON.—Rabuteau's elixir having obtained considerable celebrity, I have made a substitute by the following formula:

Take of

Protochloride of iron,	3 ds. 12 grs.
Glycerin, . .	4 fl. ozs.
White curacoa, .	12
Syrup, . .	4
Water, sufficient to make . .	2 pints.

Mix and filter.

AS AN INNOCENT BUT FULLY AS RELIABLE SUBSTITUTE FOR WICKERSHEIMER'S POISONOUS PRESERVING FLUID Hager suggests the following:

℞ Salicylic acid, . .	20.0
Boracic acid, . .	25.0
Potassium carbonate, .	5.0
Dissolve in hot water,	500.0
Glycerin, . . .	200.0
Then add Oil cinamon, oil cloves, each 15.0, dissolved in alcohol,	500.0

This fluid is not poisonous, and possesses the desirable property of acting as an antiseptic, and also as a preventive and exterminator of moths and vermin, and is possessed of a pleasant odor. The boro-salicylate may be used in connection with other solvents if desired.—*Pharm. Ztg.*

CHEKEN—A NEW REMEDY.—Dr. Henry Von Dessauer, of Valparaiso, has used cheken for some years in the treatment of a number of complaints. Thus as an inhalation he uses it in diphtheria, laryngitis, bronchitis and bronchorrhea; as an injection in certain infections of the mucous membrane, as gonorrhœa, leucorrhœa, cystitis, etc., while given internally, in the form of syrup or liquid extract, it is said to aid digestion, allay cough, facilitate expectoration, and stimulate the kidneys to action. It is also an astringent, and is found to be of especial service in threatened hæmoptysis· Dr. von Dessauer used it with marked success in more than one hundred cases of bronchitis and phthisis. For many years he was physician to a large convent school, many of the inmates of which suffered from consumption, and hæmoptysis being of constant occurrence. During the two and a-half years that he gave cheken in this establishment he had not a single death from phthisis, there were no fresh fresh cases of hæmoptysis, and many of the patients who had repeated attacks of bleeding from the lungs recovered and gained flesh and strength in very marked manner—*Louisv. Med. News.*

TO PRESERVE AND RENOVATE RUBBER INSTRUMENTS.—It is well known that many articles and instruments made of rubber are apt to become dry with time, and to crack, grow brittle and lose all elasticity. According to a Russian Journal, this may be prevented by the use of a simple mixture of 1 part aqua ammoniæ with 2 parts of water, in which the articles should be immersed for a length of time, varying from a few minutes to one-half or one hour, until they resume their former elasticity, smoothness and softness.—*The Druggist.*

MANUFACTURE OF QUINIA IN THE UNITED STATES.—An article in the New York "Times" of January 13, which has evidently been written by one well informed on the subject, refers to the price of quinia which last year averaged $2.50, the maximum figures being $3.25, the minimum $2.50. This is about equal to the quotations between 1873 and 1876 previous to the removal of duty from quinia. All articles essential for the manufacture of quinia are taxed, such as soda, fusel oil. alcohol by our navigation laws, the valuable barks from the East Indian plantations are diverted to Europe, a discriminating duty of 10 per cent. being imposed upon them here. American manufacturers are thus compelled to use barks very poor in quinia, but richer in cinchonidia, which latter alkaloid is protected by a duty of 40 per cent. Prior to 1879, about 900,000 ounces of quinia sulphate were manufactured in the United States; last year it was not over 500,000 ounces. The largest quinia manufactory is stated to be at Milan, Italy, carried on by a joint stock company, which supplies under contract East India and Russia, and produces annually about 1,200,000 ounces or about one-third of the entire consumption of the world. J. M. M.

FETID SWEATING OF THE FEET.—Dr. Willcox ("British, Medical Journal," vol. ii, 1880, p. 659) straps the affected portion of the sole of the foot as smoothly as possible with tolerably wide straps of ordinary adhesive plaster, either emplastrum saponis or emplastrum plumbi. Every part should be completely covered, and with two layers of plaster if the complaint be very bad. The plaster should be taken off and renewed in three or four days, and once again at the expiration of a week, when the skin will be found to be quite healthy.—*Medical Times.*

SALICYLIC ACID AS A FOOT POWDER.—As a protection to the feet, in the Russian army, salicylic acid is used. It is in the shape of a powder, and is a great preventive against perspiring and sore feet; Acid salicylic, 3 parts; amylum, 10 parts; powder of talcum, 87 parts. It is applied dry; on a march, daily; in garrison, every two or three days. It takes off the irritating influence of the perspiration of the feet, and prevents, in consequence, the soreness.

In the Italian army aniseed is similarly used, in hot weather.—*Med. and Surg. Rep.*

DIOSCOREA VILLOSA.—A correspondent in Iowa speaks highly of the fluid extract of this indigenous plant in bilious colic, and he relates a very severe case in which a teaspoonful dose gave immediate relief. The wild yam has long had a reputation as a "colic root." It is mentioned in the appendix of the United States Dispensatory, but as Prof. Stillé remarks, in the last edition of the National Dispensatory, "Time has not added to our knowledge of its properties." He thinks its active principle is allied to ipecac.—*Ibid*

BELLADONNA JUJUBES.—The influence of belladonna upon the mucous membranes is well known, and hence its value in some forms of irritable bladder and especially in the "nocturnal incontinence" of children, has long been fully recognized ("British Med. Jour."). Now, children do not like medicine, but they do like sweetmeats. Dr. J. Hickinbotham, physician to the Birmingham and Midland Hospital for Women, has, therefore, had made some jujubes of most agreeable flavor, each containing two minims of the pharmacopœal tincture of belladonna. The use of the jujubes will of course not be limited to the cases above described. Dr. Hickinbotham has found them useful in an obstinate "tickling" cough.—*Louisv. Med. News.*

PALATABLE QUINIA.—Dr. E. R. Dodson, of Baltimore, writes to the "Maryland Medical Journal" that he has found the unpleasant taste of quinia largely ameliorated by giving it with Liebig's liquid extract of beef, and that he has been able to administer it in this way in cases where otherwise it was impracticable. He says also that this preparation of beef taken before the quinia, appears to have a tendency towards preparing the stomach for its reception.—*Chicago Medical Review.*

CARBOLIC ACID IN FACIAL ERYSIPELAS.—Dr. Rothe, for some years past, has been in the habit of using the following application: Acid carbolic., sp. vini., each one part; ol terebinth., two parts; tinct. iod., one part; glycerin. five parts; penciling the inflamed skin and its vicinity with it every two hours. No pain or sense of burning is produced, and the skin is usually next day pale and wrinkled. The further progress of the disease is more effectually arrested than by any other remedy, any new patches being rapidly effaced, so that in three or four days the facial erysipelas is usually at an end. The penciled places should be covered by a very thin layer of wadding. When febrile action is present the ordinary internal measures must also be resorted to.—*Louisv. Med. News.*

PERFUMED CARBOLIC ACID.—

℞ Acidi carbol. cryst., . 1 part.
Olei limonis, . . . 3 parts.
Alcoholis (36°). . . 100 " M.

This mixture, which appears to be quite stable, and has only the odor of lemon, is what has been known as "Lebon's Perfumed Carbolic Acid," the formula for which has long been a secret, but has now been made known in the "Moniteur Scientifique," of Paris. The antiseptic properties are in no way affected by the oil of lemon. —*Med. and Surg. Rep.*

THE COLOR OF FLOWERS.—At a recent meeting of the Vaudois Society of Natural Science, Professor Schnetzler read an interesting paper on the color of flowers. Hitherto it has generally been supposed that the various colors observed in plants were due to so many different matters—each color being a different chemical combination without relation to the others. Now, however, Professor Schnetzler shows by experiment that when the color of a flower has been isolated by putting it in alcohol, one may, by adding an acid or an alkali, obtain all the colors which plants exhibit. Plants of Pæony, for example, yield, when macerated in alcohol, a violet-red liquid. If some acid oxalate of potassa be added, the liquid becomes pure red; while soda changes it, according to the proportion used, into violet, blue or green. In the latter case, the green liquid appears red by transmitted light just as a solution of chlorophyll does. The sepals of Pæony, which are green bordered with red, become wholly red when placed in a solution of acid oxalate (binoxalate) of potassa. These changes of color, which may be obtained at will, may quite well be produced in the plant by the same causes; since, in all plants, there always exist acid or alkaline matters. Further, it is stated that the transformation from green into red, observed in the leaves of many plants in autumn, is due to the action of the tannin which they contain, on the chlorophyll. Thus, without desiring to affirm it absolutely, Prof. Schnetzler supposes, *à priori*, that there is in plants only one coloring matter—*chlorophyll*, which, being modified by certain agents, furnishes all the tints that flowers and leaves exhibit. As for white flowers, it is well known that their cells are filled with a colorless fluid, opacity being due to air contained in the numerous lacunæ of the petals. On placing the latter under the receiver of an air-pump they are seen to lose their opacity and to become transparent as the air escapes from them.—*Journal of Applied Science.*

DR. J. HANLO in the *Weekblatt van het Nederlandschr. Tydschrift von Genkeesunde*, gives a simple method for improving the odor of Iodoform. He claims that by the addition of any of the essential oils, preferable ol. menthæ pip., the disagreeable odor of iodoform may be entirely disguised. Of two preparations, the one composed of iodoform 2 grains and collodion 30 grains, and the other of iodoform 2 grains and vaseline 30 grains, the peculiar iodoform odor was completely covered by the addition of 6 drops of ol. menthæ pip.

SYRUPUS IPECACUANHÆ. By Edward J. Lawall, Ph.G.—The following formula will yield a syrup which keeps unchanged for more than a year. Moisten ipecacuanha in moderately fine powder ℥ ii with alcohol and pack firmly in a cylindrical percolator; pour upon it two fluidounces of alcohol, and when this has been absorbed 8 ounces of a mixture of two parts of alcohol and one of water; continue the percolation with diluted alcohol until 10 fluid ounces of tincture have passed, setting aside the first two ounces so that they may evaporate spontaneously to a syrup consistence. Mix the acetic acid with the remainder of the percolate, evaporate in a water-bath, with frequent stirring, to 2½ ounces, add to the reserved portion, mix the whole with 10 ounces of water and continue the evaporation until reduced to 14 ounces. When cool, filter through paper and pass sufficient water through the filter to obtain 14 fluidounces, in which dissolve 18 troyounces of sugar by agitation; then add 4 fluidounces of glycerin and sufficient simple syrup to make the whole measure 32 fluidounces.

Lister's Antiseptic Gauze is prepared, according to C. Merciéres by melting resin 5 parts, paraffin 7 parts and crystallized carbolic acid 1 part, and dipping into the mixture for about 5 minutes pieces of unsized gauze or muslin. The excess of the mixture is removed by slight pressure, the fabric is spread out in layers, covered on both sides with pieces of gauze to prevent the dropping off of the carbolic mixture, and after having been placed between two slabs of marble for about 12 hours, completely dried by exposure to the air.—*Archiv d. Phar.*

Copaiva in Sciatica.—Dr. H. C. Marsh writes to the London *Medical Times and Gazette*, of copaiva:—I wish to speak of this drug as wonderfully efficacious in sciatica. (After describing a most obstinate case he stated) at last I prescribed

℞ Bals. copaib.,	ʒ iv
Tr. lavand.,	ʒ iv
Tr. hyos.,	ʒ iij
Pot. bicarb.,	ʒ j
Mucilag.,	℥ j
Aquæ,	℥ vj M.

A tablespoonful every four hours.—*Medical and Surgical Reporter.*

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

BLOOD-LETTING AS DISCUSSED BEFORE THE SECTION ON PRACTICE OF THE AMERICAN MEDICAL ASSOCIATION, MAY 4, 1881.

Dr. W. C. Wile, Sandy Hook, Conn., read a paper upon "Blood-Letting as a Therapeutic Measure in Pneumonia." He said that it was with great hesitation that he approached such a subject, but, that in the light of his past experience, he felt it to be his duty to do so. He could not, in the limited time at his disposal, say anything in regard to the etiology or diagnosis of pneumonia, but should confine his remarks to the consideration of a therapeutic measure. He then proceeded to say that, while he knew he was treading upon almost forbidden ground, and that he would meet with great opposition from the profession at large, he felt compelled to urge the importance of the *free use of the lancet* in pneumonia. He cited a typical case of what he called "Acute Catarrhal Pneumonia," in which he had recommended the abstraction of blood in the first stage, but in which, owing to the opposition of the family, he had been unable to carry out the practice he recommended until the disease had advanced to the second stage, but even then with the most marked and immediate favorable results. He entered very fully into the details of this case, as it was one of a class which had proved peculiarly fatal in Connecticut, under any treatment he had adopted; and reported a series of twelve other similar consecutive cases, with like favorable results.

Dr. Pepper, having arrived and assumed the chair, at the conclusion of the reading of Dr. Wile's paper, moved that the discussion be postponed until two other papers upon this subject, which had been promised, should have been read; carried. Dr. Pepper then called upon Dr. Gross to open the discussion.

Dr. Gross said he should prefer to hear from some other gentleman first, and reserved his remarks for the present.

Dr. John J. Lynch, of Baltimore, remarked that he thought, from Dr. Wile's description of his cases, that he had made a mistake in diagnosis, as they were evidently "*croupous*," and not "*catarrhal*" pneumonia. The Doctor was also probably mistaken in attributing the rapid recovery of his cases to the bleeding, because croupous pneumonia most frequently ends in from two, to eight days by sudden crisis, and Dr. W.'s cases would probably have recovered just as soon without the bleeding. Dr. L. admitted that for rapidly extending collateral hypermiaæ in pneumonia bleeding might be necessary, and was most efficient, but this was from the merely mechanical effect of the remedy, and in no sense curative. The disease would run its course afterwards in spite of the bleeding.

He hoped he would never see the day when the profession returned to the sanguinary method of treating pneumonia, less than half a century ago, when the average mortality was more than 25 per cent., while by the modern purely rational method, it was, in uncomplicated cases, not more than 4 or 5 per cent.

Dr. Whittaker, of Cincinnati, said that he thought too earnest protest could not be made against this revival of venesection at this late period in the history of science. Pneumonia is now known to be a general disease with a local expression in the lungs just as typhoid fever is a general disease with a local expression in the intestines. There could be no justification of venesection in pneumonia, except upon the theory of a local inflammation. That pneumonia is, however, not a simple local inflammation is proven by the fact that it differs in its temporal and spatial relations from local inflammations, like bronchitis, and that the local and general symptoms do not correspond in severity. The local signs may be slight and the constitutional severe and *vice versa*, just as in typhoid fever or any of the exanthemata. Pneumonia prevails at all times and places, and occurs at all ages of life like the various infectious diseases, and modern pathology has put pneumonia in the category of the acute infections. It would be impossible therefore to do anything but harm by the letting of blood at any stage of the disease. How could the letting of blood clear up a consolidated lung by pounds of blood coagulated in its interior? The essayist has, evidently, mistaken the crisis for a cure. The crisis in pneumonia may occur at any time between the fifth and eighth days, and often as early as the third, and neither blood-letting nor any other treatment could possibly cut it short. As for *veratrum viride*, that dangerous cardiac sedative, to which the speaker had alluded, it could do nothing but harm. What advantage is there in checking the force and frequency of the heart, when the increase in force and frequency is only compensatory, and is to be favored rather than checked. Pneumonia is due to a poison entering the blood and affecting the whole body, and no amount of blood-letting could let it out, any more than we can drain out the impurities of a stream with a bucket. Our illustrious professor of surgery—may the lustre of his name never grow less—may succeed by the force of his genius in restoring venesection, the lost art as he calls it, to a place in the domain of surgery, but in internal medicine it is hopelessly and irretrievably lost.

Dr. N. S. Davis, of Chicago, said that he had practiced medicine for nearly half a century, and that for fifteen years he had practiced venesection after the regular sanguinary method, and that he must say that he had found the best results from blood-letting in pneumonia, when discriminately employed.

Dr. Octerlony, of Louisville, Ky., said that he did not wish to discuss the general subject of pneumonia, but to offer some remarks in analysis and friendly criticism of Dr. Wile's paper.

In the first place, he did not deny that cases are occasionally met with in which blood-letting is indicated and will prove beneficial in relieving venous congestion, but he did not think Dr. Wile's cases sufficiently numerous to establish a law, nor were they reported with sufficient care to make them available.

The first case which the Doctor designated as *catarrhal pneumonia* was evidently *croupous* pneumonia. Of the other cases he gave no account of the physical signs, and so had left the Society in doubt as to the diagnosis.

The first stage of the disease was the period during which Dr. Wile would have us bleed, because this was the stage of engorgement; but that he (Dr. O.) claimed that even at this period exudation had already occurred, as shown by the physical signs, dullness, absence of vesicular murmur and the presence of fine crepitant *râles*. Bleeding will not return this exudation to the vessels; this can only be accomplished by a vital process. The mortality in Dr. W.'s cases was 1 in 13—far greater than that resulting from the plan of *promoting the natural progress of the disease and supporting the strength of the patient*. The duration of his cases was not less but greater than our knowledge of the natural history of the disease shows to be the rule.

In conclusion, he must insist that the writer had not proved his proposition—viz., that pneumonia is a very fatal disease, nor that the mortality or duration of the disease have been diminished by venesection. On the contrary, it seems to be a well-established fact that pneumonia is a self-limited disease. The blood-letting plan of treatment used to give a mortality of 1 in 5. The purely expectant plan 1 in 13. The plans he had here recommended gave, in Bennett's hands, a mortality of 1 in 36.

Dr. J. H. Claiborne, of Virginia, said that he did not think we could fail to go astray if we followed the teaching of the gentlemen who always recommended bleeding, nor could we fail to go astray if we believe those who tell us never to bleed. The middle course was safest, and we should be guided more by experience than by theory. There was no one method of treatment applicable to all varieties of pneumonia.

Dr. Post, N. Y., said that in his opinion no dependence could be placed in statistics, as they were drawn from a class of patients found in hospitals, who had been badly clothed and badly housed and fed all their lives, and such statistics were not reliable guides. We must be guided solely by experience. He could not sympathize with the gentleman who expressed the opinion that the lancet could no longer be used in medicine, for he believed that when properly and discriminately used, recovery was more rapid after bleeding.

Dr. Coleman of Vermont, said that theoretically he believed in the lancet in a certain class of cases, but that in practice he did not meet with that class of cases where the blood was being forced into the lungs so rapidly as to produce strangulation, as he was not called in time to see them in that condition.

Dr Quimby, of Jersey City, said that in all acute inflammatory cases where he used stimulants he lost his patients. Under a modified treatment he had lost not a patient. In all cases where he had used the lancet he had done so on the first or second day. He thought we did not often see these typical cases in the very first stages. We can't treat patients as if they were machines. He advocated the free use of the lancet, when properly and timely used.

Dr. Whitney, of New York, said that when he first commenced practice, he had felt it to be his duty to bleed all cases of pneumonia, since then he had to a great extent abandoned the use of the lancet. But that he thought the mortality had never been so great before as since the abandonment of venesection. He thought we did not bleed half enough.

Dr. Ballou of Rhode Island, had never used the lancet—that he regretted it—but had often failed to bleed, and regretted it very much.

Dr. North of Iowa, always carried a lancet; he had never lost a case of pneumonia, and had never yet bled one.

Dr. Jackson of Virginia, thought it objectionable to speak of blood-letting as a treatment of pneumonia—we ought to speak of it as an adjuvant or auxiliary. It was wrong to let it go abroad among the younger men that we had either advised against or for blood-letting.

Dr. S. D. Gross belonged, he said, to the younger members of the profession. He had listened with deep interest to the remarks made here. Pneumonia was an inflammatory affection, and the lancet, in such affections, was applicable in young, robust and healthy subjects. Bleeding was not applicable in *all* stages of pneumonia, but only in the commencement, when the disease was in its infancy—not later. We employed bleeding simply as an adjuvant, and under such circumstances we employ it wisely. If, however, we wait until consolidation has taken place, bleeding does harm, no matter what be the form of pneumonia, whether croupous or catarrhal. If bleeding was performed in time, and on proper subjects, it was the great remedy in this disease.

Dr. Lester, of Michigan, did not think the practice of venesection so good as the theory. We did not bleed in cerebro-spinal meningitis, because we knew we should lose our patients; but we used the supporting treatment. He asked what was the difference between the two inflammatory conditions? He was surprised at so much advocacy of the lancet in pneumonia, and would like to see it dispensed with.

Dr. Martin, of Massachusetts, trusted that it might go out to the world that the American Medical Association sanctions the *occasional* use of the lancet, at least.

Dr. Wile, of Connecticut, in closing the discussion, expressed his gratitude for the courteous manner in which his paper had been discussed, and he accepted from the gentleman their diagnosis of his cases. He felt delighted to learn that pneumonia was such a pleasant disease to treat as those gentlemen who proscribed the lancet seemed to think it. The cases he had reported were of the class, and the only class, he had met with in Connecticut. He did not wish to be understood as saying that the lancet was the only mode of treating pneumonia, but that it was the only way of treating those cases of pneumonia with which he had come into contact in Connecticut.—*Va. Med. Monthly.*

OPERATIVE INTERFERENCE IN GUN-SHOT WOUNDS OF PERITONEUM.

A paper read by Dr. HUNTER McGUIRE, Richmond, Chairman of the Section on Surgery.

The title of the paper indicates the grounds taken by the writer in favor of operative interference, and the views embodied in the paper tend to prove the position advanced by the writer, that the patient will exchange an almost certain prospect of death for at least a good chance of recovery, and should, we think, embolden surgeons to think less of expectant treatment and more of operative interference. Statistics from the Crimean, the French and the late civil war in America, show that more than nine out of every ten cases of wounds of the belly, opening into the cavity of the peritoneum, perish—no other gunshot wounds being so deadly, not even penetrating and perforating wounds of the skull. In incised, punctured and gunshot wounds of the peritoneum, the general plan of treatment has been to enjoin absolute rest, give opium to prevent peristaltic action, and encourage the formation of adhesions, in the idle hope of preventing extravasation into the peritoneal cavity. It is claimed that the wound may paralyze the muscular coat of the bowel; or in small wounds the mucous coat is everted and closes the aperture, or the part injured may not be covered with peritoneum and no extravasation take place within the peritoneal cavity, or that the serous membrane covering the intestine near the point wounded may become adherent to the omentum, to the bowel or to the abdominal wall, and the orifice in the bowel become permanently closed; at last, but very rarely, the extravasated mass may become encysted, end in abscess, and discharge itself through the neighboring skin or mucous surface. In the opinion of the writer, when we remember that the alimentary canal is never completely empty, common sense teaches us, when an opening is made in any portion of the peritoneal cavity that its contents will escape; that there will probably be less resistance to the passage of fæcal matter through the unnatural aperture than along the sides of the canal itself. Gas may first be expelled, separating peritoneal surfaces, and then the fluid or solid contents of the bowel follows. Only one or two exceptions to this rule are reported in the history of the late war between the North and South. But, besides alimentary effusion, blood, air, bile and urine may also be extravasated into the peritoneal cavity. Penetrating wounds of the belly, with fæcal effusion, are rapidly followed by general acute peritonitis; 90 per cent. die, and within 48 hours. Does peritonitis from any other cause, as a rule kill as quickly? In spite of the assertion of Malgaigne and others, that the organs contained in the belly fill the cavity to such repletion that shot wounds of that space without visceral injury are impossible, *post-mortem* examinations and experiments upon dead bodies show that wounds of the peritoneum can be made without injury to the contained viscera. It has fallen to the lot of the writer to witness four such cases. Two occured in civil life, and being the subject of legal investigation, careful autopsies were made. Two were soldiers dying from peritonitis, and the autopsies showed no visceral lesion. These four cases, coming under the observation of one individual, and having their exact character shown by *post-mortem* examinations, prove that such results are not impossible, and probably not as rare as we have been led to suppose. Those rare cases of recovery from penetrating wounds of the abdomen have induced surgeons to continue the expectant plan of treatment in place of what appears, at first sight, to be a desperate surgical interference. Some of the alleged recoveries may have been wounds of a portion of the large intestine not covered by peritoneum. Recovery with fæcal fistulæ, is not uncommon in this case; others may have been penetrating wounds without visceral injury; others again may have been parietal wounds without peritoneal penetration. In connection with the four cases of gunshot wounds of the peritoneum alluded to by the writer, and in which there was no visceral injury, the total absence of shock was remarkable, and no diminution of temperature. One of them (a soldier) assured the writer that he did not know that he had been wounded until some time after he had been shot. Another (wounded in a duel) insisted that he was able to stand up and give his antagonist another fire. On the other hand, in all cases with visceral lesions the shock of injury is a prominent symptom. The presence or absence of shock seems to be a diagnostic point of no little value. If to this be added sudden meteorism, the character, extent and direction of the wound, bloody discharges from the bowels or stomach, an almost certain diagnosis by rational symptoms will be reached. In reply to the question, Why are these injuries so fatal? why, after escaping death from peritonitis, shock and hæmorrhage, peritonitis is fatal in 48 hours, the writer attributes death to some kind of blood-poisoning connected with peritonitis, just as we often see septicæmia associated with peritonitis under other circumstances, notably after parturition and ovariotomy. He believes that the blood-poisoning after gunshot wounds of the peritoneum is consequent upon the pent-up, red, sero-fibrinous exudation which traumatic peritonitis invariably produces in abundance, and that if this effusion could be drained off as soon as it is formed, septicæmia might be prevented. Lacerated wounds of the abdominal walls, with exposure of the cavity, protrusion of the contents and the introduction of foreign matter into the cavity are nothing like so mortal.

In all of these cases the nature of the wound prevents union by the first intention, and drainage of abdominal effusion is effected. In the fifty-nine cases of recovery after penetrating wounds of large intestine, fifty-five were perforating wounds, the large aperture of exit being usually on the posterior surface of the body, dependent and facilitating dranage. In one of the four instances of recovery in simple penetrating shot wound of the large bowel, the edges of the opening in the bowel was fastened to the wound in the abdominal wall, and in this, as well as in the other three cases, fæcal fistulæ were formed. Shot wounds of the pelvis are nothing like so fatal as wounds of the peritoneum higher up. Unless accompained by grave visceral lesion, three cases out of four of penetrating or perforating wounds of the pelvis recover. Can this fact be satisfactorily explained upon any other theory than that drainage in these wounds is almost unavoidable? Indeed, in these cases we are taught to explore the wounds with the finger, remove loose pieces of bone and foreign bodies, and keep the aperture of entrance and exit open, that free vent may be given to all inflammatory products; and if the size and position of the wound do not facilitate this, we make the opening bigger and insert a drainage tube. Spencer Wells attributes the fatality after ovariotomy to some form of pyæmic fever or some form of blood poisoning so often associated with peritonitis, and thinks the lesson taught by many successful ovariotomists of providing for the escape of inflammatory matter, of great value, and one which should be profited by the surgeon who treats gun-shot wounds of the peritoneum. Ovariotomists even go so far as to wash out the cavity when peritonitis exists and death from septicæmia is imminent. In many of the cases of penetrating wounds of the peritoneum, the ball passes obliquely through the adominal wall and the aperture shuts up like a valve, or if passing directly through the parieties, the aperture of entrance contracts at once and closes. To all intents and purposes the cavity is hermetically sealed, and the missile, pieces of clothing, blood from wounded vessels, fæcal effusion, if the intestine is wounded, and inflammatory products, are all hopelessly imprisoned there. Can it be wondered that such wounds are fatal? In no other gun-shot wounds of cavities do we allow the wound of entrance and exit to be closed. Who would think of shutting up the opening in gun-shot wound of the knee-joint? During the late war, the plan of hermetically sealing up wounds of the pleura, a structure analogous to the peritoneum, proved most disastrous. In gun-shot wounds of the chest involving the serous membrane, we keep the wound patent, and if not dependent, we do not hesitate, when effusion takes place, to make a counter-opening with a knife or trocar, and sometimes to flush out the cavity with detergent and antiseptic lotions. In view of these facts, the writer ventures to advocate operative interference in gunshot penetrating wounds of the peritoneum with intestinal injury, in penetrating wounds of the peritoneum with any visceral lesion, and similar cases without visceral injury. The wounds in the abdominal walls should be enlarged, or the linea alba opened freely enough to allow a thorough inspection of the injured parts. Hæmorrhage should be arrested. If intestinal wounds exist, they should be closed with animal ligatures, trimming their edges first if they are lacerated and ragged. Blood and all other extraneous matter should be carefully removed and then provision made for drainage. If the wound of entrance is dependent, drainage may be secured by keeping this open. If the wound is a perforating one, and the aperture of exit dependent, the patency of this should be maintained, and if necessary, a drainage tube of glass or other material introduced. If there is no wound of exit, and the wound of entrance is not dependent, then a dependent counter-opening should be made and kept open with a drainage tube. If it is urged that the means suggested are desperate, it can be said in reply that the evil is desperate enough to justify the means.

At the close of the reading, Dr. McGuire was loudly applauded, and his paper appropriately referred.—*Ibid.*

Can we Make a positive Diagnosis of Pregnancy Previous to the Occurrence of the Audible Sounds of the Fœtal Heart and the Detection of the Fœtal Movements?

The subject of an article by Dr. Joseph Tabor Johnson, of Washington, D. C. Read before a Section of American Medical Association, May 4, 1881. It is claimed that in the softened condition of the cervix uteri and the pinkish color and increased temperature of the vagina, we have quite positive diagnostic evidence of pregnancy. It is admitted that the only postive and indisputable signs are determined by auscultation, ballottement and fœtal movements; but these signs are not usually present in the first half of pregnancy. The presence of kiesteine in the urine, milk in the breast, the odor of vernix caseosa upon the finger as it is withdrawn from the vagina after a digital examination, the smooth condition of the anterior wall of the vagina and anterior cul de sac, associated with a pinkish purple color of the vaginal mucous membrane, the placental souffle the existence of *gravidene* in the urine, the presence of certain caseous elements resembling milk in the urine, were all passed in review as diagnostic signs of pregnancy; but no definitely stated conclusion was arrived at.

Dr. R. Beverly Cole, of San Francisco, California, did not hear the whole of Dr. Johnson's paper, but thought from what he did hear, it was rather an interrogation than a treatise. He then stated that there were three physical signs of pregnancy which he relied chiefly upon, viz: 1st, placental souffle, 2d, pulsation of the cord, and 3d, the sounds of the fœtal heart. He regarded the last as the best and most reliable of them all. The pulsations vary from 110 to 140—double that of the mother. He described the sound as resembling the ticking of a watch under a pillow. Dr. Cole thought no signs positive enough (generally) to justify one in giving *decided* opinions when consulted on this point. He then cited a case, that of a girl who came to him and wished to ascertain whether or not she was pregnant. She appeared to be about six months advanced. Placental souffle was present, but no pulsation. The navel was protruding—admitted that she had intercourse with a man about six months before, and had not menstruated since. The Doctor then made an appointment for another examination, but she went to another physician, who examined her six times, called in some three or four others in consultation, who advised the introduction of a sound. This was done, and when it was withdrawn the dissharge proved that it had penetrated into an abscess which Dr. Cole thought was undoubtedly due to pelvic cellulitis.

Dr. Albert H. Smith, of Philadelphia, thought placental souffle the most unreliable of the signs mentioned by Dr. Cole. He was anxious, he said, to hear Dr. Jos. Tabor Johnson's results from the thermometric observations on the cervix uteri. He thought Dr. Johnson's suggestions in regard to the application of the telephonic principle to the uterine sound, and the use of the electric light for illuminating the vagina, very good—quite brilliant, he would say. Liked the bi-manual method best of all.

Dr. Paul F. Mundé, of New York city, agreed with Dr. Smith. His favorite method was the bi-manual. He thought Dr. Smith had touched the key-note in making this statement. He thought that this method, taken with the other signs usually associated, would enable one to make out a case better than by any other methods he knew of. He cited a case in support of his position.

Dr. Alex. Dunlap, of Ohio, agreed with Drs. A. H. Smith and Joseph Tabor Johnson. His method was the same, the bi-manual. The presence of fibroids may sometimes mislead as they enlarge the womb, but they are generally hard when small. Sometimes soft and dropsical when large, and rarely symmetrical. These points he thought it well to notice. Sanious discharge from the os is strong evidence of intra-uterine fibroid.

Leprosy. By Henry G. Piffard, M. D.

Read before N. Y. Acad. Med.

Leprosy is a constitutional affection, characterized by marked and peculiar changes in the skin and other organs of the body. It presents three principal forms, known as the *macular*, *tubercular* and *anæsthetic*. These are usually associated together in varying degree in each case, although one of them as a rule predominates over the others.

There usually exists a podromal stage, often of years' duration. During this period the only evidence of ill-health may be a feeling of languor or loss of force, with sometimes mental depression.

A brownish discoloration (macule) may appear from time to time, the first usually healing before the second makes its appearance. Later the macules become more numerous, or at first of a reddish-brown, the central portion, however, gradually fading into a dirty gray, and sometimes to a dead white. When the patches first appear they are *hyperæsthetic*, but ultimately become *anæsthetic*.

Tubercles also may arise, their favorite seat being the face. They are thickened elevations of the skin, which are at first hyperæsthetic, afterwards anæsthetic, and may persist throughout the whole course of the disease, or undergo ulceration, or disappear by interstitial absorption. Coincidently with these changes, or later, the mucous membranes of the buccal cavity, nares, pharynx, etc., may present similar lesions.

The *anæsthetic* forms of leprosy may arise at a late stage in the course of a case that at the beginning had exhibited macular or tubercular features only, or it may occur without such tubercular development. The principal cutaneous lesions met with at the commencement of this form are *bullæ*. The tissues may undergo atrophy and ulceration and the bones caries, so that in time all of the fingers and toes may drop off. In this form especially the ulnar nerve just above the elbow becomes swollen and tender.

Course. The course of leprosy is chronic, five, ten, or fifteen years elapsing before the patient falls a victim to the disease, usually through the medium of some inter-current disease.

Diagnosis. In advanced cases the diagnosis presents no difficulty, as the features of the disease are exceedingly characteristic. In the earlier stages changes about the ulnar nerve might give a clue, which the history of the patient, his former place of residence, etc., might confirm. The macular form might be taken for vitiligo, but a careful comparison of the two diseases need not leave the inquirer long in doubt.

Prognosis. The prognosis of leprosy is, without question, very unfavorable. A few cases appear to have been cured, a large proportion have been benefitted, and in a still larger proportion the progress of the disease has not been stayed.

Etiology. Further than the fact that leprosy is frequent in some parts of the world and rare in others, we know very little regarding the immediate causes that tend to produce the disease. In North America it exists among the Chinese in California, among the negroes in Louisiana, among the Norwegian emigrants in the West, at the village of Fracadie in New Brunswick, and in Mexico. I have personally examined a dozen or more cases in New York city, one of which had resided in the State.

In regard to the question, is the disease contagious or infectious in any degree or manner, a careful review of the evidence presented on both sides leads me to the conclusion that probably leprosy, like syphilis, is not transmissible by ordinary contact and association, but if the blood or secretion of a leper gain access to the system of a healthy person the latter may in this way contract the disease.

Treatment. Before entering into the questions relating to the direct treatment of individual cases, it is important to consider the management of the disease *en masse*, that is to say, the general prophylaxis. The principles that underlie this are sufficiently well understood, and there is almost absolute unanimity of opinion as to the proper course to be pursued. If a given community is to be protected from the spread of leprosy, all cases that exist in it at the time should be absolutely separated from the rest of the inhabitants. Each new case, as it appears, should be sent to join the company of the unfortunates. There are at the present time in the United States probably over fifty lepers, and it is time that suitable measures were taken to prevent their further increase. A central lazaretto and appropriate national legislation will secure this end. The experience of other countries, notably that of the Sandwich Islands, should warn us not to defer the consideration of this subject too long.

In the management of individual cases general hygiene claims the first attention. A number of drugs have been credited with being capable of rendering more or less service in the treatment of this disease. Some of these appear to have fallen into disuse, while others are of too recent introduction to enable us as yet to form a just opinion of their true value.

The principal indications for treatment are at first to relieve the pains incident to the disease ; to restore the sensibility to the anæsthetic parts ; to heal the ulcerations, if any exist, and to cause the tubercles to disappear. Second, to retard the progress of the disease, and, if possible, prevent its furher development.

Dr. Piffard here gave a very thorough exposition of the treatment of leprosy up to the present time, mentioning, among the most prominent therapeutic agents, *oleum gynocardiæ* (Chaulmoogra oil), *nux vomica,* and *hoàng nàn,* the latter being an intensely bitter, brownish powder, belonging to the strychnia family, and given alone or in one of the following combinations :

Alum - - - 1 part.
Native realgar - - 2 parts.
Hoàng nàn - - 2 parts.

or,

Alum - - - 1 part.
Realgar - - - 1 part.
Hoàng nàn - - 2 parts.

These mixtures being made into three-grain pills, of which the commencing dose is one pill daily, to be gradually increased.

As the result of the treatment of those cases coming under his personal care Dr. Piffard said : I have found the pains of lepra controlled by blisters along the course of the affected nerves : I have seen the tubercles disappear under application of both ungt. potassii iodide and of chaulmoogra, and apparent benefit derived from the internal use of chloride of barium in doses of one-tenth of a grain to one-half grain daily, and very decided benefit follow the internal use of chaulmoogra.

Thus far treatment has been purely empirical, but a study of the disease itself, taken in connection with the results of treatment thus far obtained, appears to give a clue to a method that may prove still more serviceable.

The symptoms of the disease are referable to both the skin and nervous system. The special point of interest is to determine in which system the lesions first show themselves. Do the cutaneous lesions appear first, followed by lesions of the nerves or spinal cord, or is the cord first affected, followed by degeneration of the nerves, and ultimately of the skin ? The study of cases and the results of a post mortem examination of a case that died under my care last year, together with other circumstances, lead me to the opinion that the disease first attacks the spinal axis, and then involves the nerves, and later implicates the skin. The earlier changes in the nerves would appear to be of a subacute inflammatory, or rather proliferative character, succeeded by sclerotic degeneration and atrophy. If this theory of the disease is correct, it naturally follows that, before commencing treatment, we should carefully consider the stage and condition the disease is in. In the earlier periods, where we have reason to believe that hyperæmia and irritation of the cord exists, our treatment should be specially directed to their relief. To this end counter-irritation, minute doses of strychnia, or full doses of ergot or bromide of potassium would seem appropriate. Later, I think that mercury, iodide of potassium and chloride of barium would come in play, and still later, when sclerotic degeneration is commencing, strychnia, phosphorous, phosphoric acid, etc., in full doses, and galvanization. This, together with suitable local treatment, would seem to me far more rational than to follow what appears to have been the usual plan, namely, to select one or two drugs and make them the mainstay of treatment, irrespective of the stage or grade of the malady.

Dr. Piffard concluded by citing the views of Dr. Laboute, of Mauritus, on the treatment of leprosy, who speaks of the therapeutics of the disease as follows: I am perfectly satisfied that ere long a cure may yet be found, and at this present moment we have the means of checking effectually the disease in its progress, and of relieving the sufferings of the patient. Leprosy, tubercular or atrophic, being a dyscrasia, and its poison being specific, I have invariably, at the outset of the disease, as well as in its advanced stage, combined alterative medicines with what are commonly called specifics; amongst others, chaulmoogra oil, the fluid extracts of the hydrocotyle asiatica, the siegesbeckia orientalis, cassia occidentalis, c. rosea linn.

When I have to deal with patients who are in earnest, and willing to live in the enjoyment of comparatively good health, all active treatment is now and again suspended. Mineral waters, alkaline or sulphur, as the case may be, are prescribed; cold shower baths, the arseniate of iron, cod-liver oil, and other alterative and tonic medicines. Many a patient continues well this way. Not so when we have to do with a class of patients who will be steady only when they cannot help being otherwise. With them the immunity from the disease will be of comparatively short duration, relapses will be frequent, and with each relapse there will be some new complication, until the disease, getting the better of them, will run a rapid course to terminate in death.—*Medical Gazette.*

A MEDICAL IDYL.—THE IDEAL AND THE PRACTICAL.—Some years ago a young man named Eidolos graduated at one of our best medical colleges. He had formed his ideal of the true physician and intended to regulate his life by the standard which he had set himself, and resolved to so control and govern his every action that in the end he would attain unto the likeness of that exalted type the image of which was enshrined within his breast. The last words of the eminent man who had addressed his class on the day of graduation were: "preserve your ideals." These words constantly rang in the ears of the young man and he adopted them for his motto.

He located in a small lumbering town in the northern part of Michigan, whose streets were still encumbered with pine stumps. Here he began the practice of his profession and was not long without applicants for treatment.

A lumberman in a neighboring camp was taken sick and our new man sent for. The case proved to be one of pneumonia. Lumber camps afford but little in the way of care and nursing—they are not hospitals. Our doctor did all he could and attended him faithfully for two weeks but the patient died. The "boys" took up a collection and bought a $40 coffin and gave their dead comrade a $30 funeral, when after paying the apothecary's account there was $5 left for the doctor. People said he was not practical or he would have secured his whole bill.

Late one night the doctor was visited by a strapping young fellow who lived some distance in the country. He was backward about making known his errand but it came out at length that he wanted some "driving medicine." He had been too intimate with a young woman in his vicinity and he wanted something to "drive" the impediment to the menstrual flow out of the way. Our doctor read him a lecture on the enormity of the proposed practice and urged him to marry the girl. In a few months thereafter the doctor attended the young fellow's wife in confinement. His fee for the service was in money *nil*, but in satisfaction at the result immense. Here again he was not practical for the young fellow had been prepared to pay for the medicine.

Soon afterwards Dr. Eidolos removed to a larger and more flourishing town.

Among those who first called on him was the wife of a prosperous merchant. She stated that they had one child and did not desire another *so soon* and she thought she was again pregnant. An examination revealed the fact that her surmises were correct. The doctor's aid was solicited to avert the trouble and the request was backed up by the proffer of a $50 bank note and the covert offer of her favors. The doctor was young, handsome, and poor, and he was more than mortal. He declined; you see he had an ideal. The lady soon after was taken ill and Dr. Praxis attended her. He said she had a severe cold and would soon be well. The result justified his predictions. Praxis understood his business and was soon getting all he could attend to. This lady said Eidolos was not a practical man.

One day Eidolos called to pay a visit of courtesy to a lady patient who was almost convalescent from a tedious illness. With her returning health the fires of passion burned afresh and as he rose to leave she stood against the door barring his exit from the room and inviting him by word and look to her embrace. Dr. Joseph Eidolos was equal to the occasion. He said it was impossible, and then smilingly, gently, firmly he opened the door and departed. This lady was heard to express her opinion that he was not a practical man. Praxis would have been more accommodating.

About this time a lady well on in years, the wife of a prominent official in one of the churches asked the help of Dr. Eidolos in what she call an "accident." Their children were grown up and they did not desire any more so late in their married life. Eidolos declined to interfere and she had recourse to Praxis who prevented the accident. During their conversation she referred to Eidolos in this way:

"Do you know Dr. Eidolos?" she asked. "Yes."

"Do you think he is a practical man?" "No."

"But you are, Dr. Praxis." "You bet."

Praxis had been a drayman, had attended one course of lectures in a reputable institution and then bought a diploma at the factory. He was not troubled with ideals.

There was a fellow on Mount Ararat waiting for the ark to land. His name was Praxis and he was a commercial traveller. But when he found that Noah and his family were all sick he turned doctor. (He had one of Buchanan's diplomas in his pocket). That man's descendants have been doctors ever since, and they are a numerous lot. These are they who open medical institutes in the cities and have stated days for visiting the rural places; who flood the country with circulars and have whole page "ads" in the dailies. Every one is their victim that they can fasten on and they are your true "leeches."

Praxis also resides among the dwellers in the larger cities of the east, and anon he writes a book the sales of which amount to a single copy. Occasionally he converses with himself on some current topic and has the interview published in the daily newspapers. His most delightful aspect is when he postures as a hybrid between a scientific acrobat and a medical mountebank to amuse an audience with a performance on "Trance" or "Hypnotism." This is the kind of a subject which gives Praxis a chance to keep himself before the public; where only he thrives, while the pseudo-scientific world gapes with wonder at his lore.

But where is Eidolos. He also is a dweller in the city. Is he an iconoclast? Has he shattered his idol? Has he cursed his god and gone to practicing on his "cheek?" Not he. A well-known, quiet, and unobtrusive man, he pursues his daily round of duty. He is ready in counsel and of high repute in his chosen walk. On occasions he contributes to the journals, and his articles are well-studied and full of meat. Honor, and fame, and wealth, are coming to him. He cannot attain his ideal here for, now his motto is "Excelsior."

And where is Praxis? Some of him are in the penitentiary, and the rest keep to their old ways.—*Mich. Med News.*

DETROIT MEDICAL COLLEGE.—A SPLIT.—The unfortunate internal dissensions which have been rending this institution during the past few months have culminated in the resignation of the major portion of its corps of professors. The dispute had its tangible origin in a desire on the part of the president, Dr. Theodore A. McGraw, to have Dr. Eugene Smith appointed as clinical professor of ophthalmology. This proposition the majority of the faculty very emphatically declined to concur in, and Dr. McGraw, making an issue of it, tendered his resignation to the board of trustees. The board, however, requested him to withdraw his resignation which he did, conditioned, it is presumed, on Dr. Smith's appointment. At all events Dr. Smith was made by the board of trustees clinical professor of ophthalmology, and contrary to the wish of the faculty, as determined by a vote of six to four. Under the circumstances what followed was, of course, inevitable, and after a preamble embodying their reason in detail, of which the following is the concluding clause; "In our belief it opens the way for rendering the course liable to be conducted for personal aggrandizement, sacrificing the interest of education and the dignity of the profession to personal ambition, and converting the clinics, dispensaries and other charitable features of the

College into transparent advertising schemes in the interest of the faculty. We believe that the best antidote to this danger lies in the American principle of the majority rule, and with the death of this principle in faculty government we cannot consistently remain connected with the College," the following gentlemen resigned:

Jas. F. Noyes, M.D., Emeritus Professor of Ophthalmology and Otology.

Geo. P. Andrews, M.D., Professor of Principles and Practice of Medicine and Clinical Medicine.

C. B. Gilbert, M.D., Professor of Obstetrics and Diseases of Women and Children.

Samuel P. Duffield, M.D., Professor of Toxicology and Medical Jurisprudence.

Albert B. Lyon, M.D., Professor of Chemistry and Director of Chemical Laboratory.

Leartus Connor, M.D., Professor of Ophthalmology and Otology.

Hal C. Wyman, M. D., Professor of Physiology and Director of Physiological Laboratory.

Morse Stewart, Jr., M.D., Instructor in Materia Medica and Therapeutics.

The students in attendance have also expressed their views on the situation in preamble and resolution of which the following is the conclusion:

"Further we believe that the withdrawal of Prof. Connor, together with Profs. Noyes, Andrews, Gilbert, Duffield, Lyons and Wyman and Dr. Stewart, will tend to lower the standing of the college in the opinion of the profession and public; and that it will be to our interest as present students and future practitioners, to attend and graduate from some other institution than the Detroit Medical College."

The whole affair seems to be another effort at the solution of the problem: "Does the dog wag his tail or does his tail wag the dog?"—*Detroit Lancet.*

THE ANÆMIC CENTURY.—A recent number of the *L'Union Médicale* contains an amusing account of the method adopted by Ambrose Paré to combat the anæmia and debility consequent on suppuration of bone. There was a certain Marquis D'Auret, who was seriously wounded. He sent for Paré , who found him anxious above all things about dinner. And such a dinner! "I entered the kitchen," says Paré, "there I saw a man throw into a large cauldron half a sheep, a quarter of veal, three pieces of beef of great size, two pullets, a fine big flitch of bacon, and a great store of fine herbs. Then said I within myself, that this soup was succulent and excellent for nourishing." The marquis had been shot in the knee, with fracture of the femur, and consecutive necrosis. Paré was very attentive to him, and to combat the debility prescribed this regimen. He says: "In order the better to relieve the feebleness of the marquis, I thought it right to use much good and succulent aliments, such as boiled eggs, Damascus raisins preserved in wine and sugar, also *panade* made with the soup from the big cauldron (of which I have spoken above) with the breasts of capons, the wings of partridges hashed and well dressed, and other like matters easy to be digested, as veal, kid, young pigeons, young partridges, thrushes, and others of the same sort. The sauce to be of orange, sorrel juice, bitter pomegranates; he shall likewise eat of beef boiled of good herbs, as sorrel, lettuce, purslain, chicoree, marigold, and other such; his bread shall be made of meslin (a flour obtained by sowing wheat and rye together) and neither stale nor too soft."

Well may Dr. Simplice, who quotes this story from *Les Capagnes d' Ambroise Paré* (by Garadec Fils) exclaim, "Who dare prescribe such a regimen to the wounded of our own day? Is there, as so many of our *confréres* maintain, a serious change in the constitution of the present generation? Oh, nineteenth century, art thou in truth the *anæmic* century!"

ANGELS IN THE HOUSE.—In the last fasciculus of the *Bulletins de la Societe d' Anthropologie de Paris*, M. Bertillon gives the results of his comparative analyses of the statistical tables of suicides for France and Sweden. These results show singular accord between the two countries, and the author considers himself justified in maintaining that they establish the two following laws: 1. Widowers commit suicide more frequently than married men. 2. The existence and presence in the house of children diminishes the inclination to suicide both in men and in women.

THE parish priest, of Sendomi, in the diocese of Lerida, Spain, has declared that the last absolution, extreme unction and Christian burial will be refused to any parishioner who allows himself, or whose kindred allow him, to be treated by any but duly qualified medical practitioners. All who are treated homœopathically will be deprived of the rites of the Roman Catholic Church, and be treated as Moors or Jews.—*London Lancet.*

NOTES ON THE TREATMENT OF DIPHTHERIA.—In 150 patients suffering with diphtheria, C. has lost no case since he has used liq. ferri sesquichlor, locally and internally. Mixed with equal quantities of water it is painted (a pencil of lint) over the bleeding mucous membrane subsequent to the removal of the pseudo-membranes. Injections of a weaker solution, 1:3 aq., are made into the nostrils; internally, the proportion of 10 to 20 drops in 200 of water; a teaspoonful every fifteen minutes. This treatment is continued until no membranes show themselves. It seems as if the most of C.'s patients had passed the age of childhood (42 cases from the school of cavalry in St. Petersburgh). He has treated no children under two years of age.—A. v. Collan, St. Petersburger *Med. Wochenschrift,* 1880.—*St. Louis Clinical Record.*

PHYSIOLOGY FOR FOOLS.—THE Rev. Joseph Cook, a well-known American pulpit-orator, has come over to this benighted country to overthrow Huxley, Michael Foster, and other philosophers. The plea for this special mission appears to be that, having himself attained to an accurate knowledge of scientific research, he is competent to expose the fallacies of men of science. Judging, however, from some extraordinary statements which this lecturer is reported to have made with reference to the action of alcohol on the living brain, our modern scientific inquires may take heart of grace. and rest in peace a little longer, Mr. Cook, in sight of large audiences in the North, poured alcohol on white of egg. After stirring this for a few minutes, he held the mass up as the representation of a moderate drinker's brain. After a longer interval, the mass having become hardened, was exhibited as a fair illustration of a drunkard's brain. With lamentable ignorance of the science he professed to know, the reverend lecturer proceeded to state, as a fact, that alcohol hardened the living human brain, leaving indelible scars on the cerebrum.

The elementary fact that, while alcohol hardens dead cerebral substance, in life it induces softening of the brain, is, it must charitably be assumed, unknown to him. Before public dogmatic statements on physiological questions are made, it is desirable that lecturers, of whatever profession or country, should, for their own reputation, and for the truth's sake, ascertain the elementary facts, either by personal research or by consulting some competent physiologist. Such prolusions as these cover with ridicule a good cause, which most members of the profession have, we are convinced, deeply at heart, and can only disgust sensible hearers. *British Medical Journal.*

BALMANNO SQUIRE'S, IMPROVED MODE OF EPILATION IN RINGWORM.—As the subject of the treatment of ringworm *(Tinea tonsurans)* is just now attracting special attention, I wish to draw attention to a method of epilation which I have recently practised, and which I believe to be more effective, mor expeditious, and less objectionable than epilation by forceps. It is generally acknowledged that epilation is desirable. It is admitted by every one, that epilation by means of the forceps is, at the time when it is most required, that is to say, when the hairs are the most diseased, impracticable, on account of the extreme brittleness of the hairs.

My plan is this, and it is a very simple one. When scabs exist over a patch of ringworm, I peel the scab carefully off in one piece. When scabs do not exist, I produce them artificially, and then carefully peel them off in one piece. Thereupon the under surface of the scab is seen to be thickly studded with the white frosted hair-stumps which are peculiar to ringworm, presenting the appearance of the chin of a grey-headed man who has not been shaved for a week. Now these stumps are considerably longer than any bits that can be pulled out or rather broken off by means of the epilating forceps; it might be supposed that it is impossible to peel a brittle scab off in one piece, and that it would be painful to attempt it. But the scab may be expeditiously taken off whole and without any pain, if it be removed by means of the small sharp steel spoon that I am in the habit of using for performing "erasion" in cases of lupus. It is sold by Messrs Weiss of the Strand. The scab adheres to the skin *only all round its edge.* By applying the side edge of the spoon to the edge of the scab and then slightly rotating the spoon, the edge may be completely detached all round, without hurting the skin in the least degree. Then commencing again at one edge of the now loosened scab, and advancing the spoon along the under surface of the scab, constantly making use of the lever movement which is effected by repeated slight rotations of the spoon, the whole scab may be rapidly romoved in one unbroken piece with the affect that I have described.

I should add that I first remove the hair of the whole of the scalp by means of my human hair-clipper, which is sold by Messrs. Adie of Pall Mall, and by the various instrument-makers, and which I believe is now in general use as an aid in the treatment of diseases and injuries of the scalp.—*Lancet.*

CARBOLIC ACID IN FACIAL ERYSIPELAS.—Dr. Rothe observes (*Betz. Memorabilien*) that, however efficacious the subcutaneous injection of carbolic acid proves in arresting the course of erysipelas, it is not suitable when the face is the part attacked, for not only does it give rise to considerable pain, but induces a swollen and painful condition of the periphery (*Medical Times and Gazette*). For some years past he has been in the habit of using the following application: Acid carbolic., sp. vini, each one part; ol. terebinth. two parts; tinct. iod. one part; glycerin. five parts; penciling the inflamed skin and its vicinity with it every two hours. No pain or sense of burning is produced, and the skin is usually next day pale and wrinkled. The further progress of the disease is more effectually arrested than by any other remedy, any new patches being rapidly effaced, so that in three or four days the facial erysipelas is usually at an end. The penciled places should be covered by a very thin layer of wadding. When febrile action is present the ordinary internal measures must also be resorted to.—*Louisville Medical News.*

Senator Carpenter and the Colon.—The bright, mirthful soul of Carpenter was not overawed even by the shadow of death. The evening before he died he suffered excruciating pain, and in his agony wanted an explanation of the cause. "The pain is caused, senator," replied a physician, "by a stoppage of the colon." "Stoppage of the colon, eh?" and again the sense of humor overcame pain itself. "Well, then, of course *it isn't a full stop.*"

The Strongest Man in the World.—At. Reno, in Nevada, according to one of Mr. R. A. Proctor's letters to an English journal, there now lives a man who is probably the strongest in the world. His name is Angelo Cardela. He is an Italian, age 38 years, 5 feet 10 inches in height, and weighing 190 lbs. He is a laborer, of temperate habits, but not objecting to the moderate use of malt liquors and light wines. In personal appearance he is not remarkable, but "merely a good-natured-looking son of Italy, with a broad, heavy face, a noble development of chest and shoulders, and large fleshy hands." His strength was born with him, for he has had no athletic training. This strength does not reside in his hair by any means, but apparently as much in his bones as in his muscles. At any rate, he differs from other men chiefly in his osseous structure. Though he is not of unusual size, his spinal column is double the ordinary width, and his other bones and joints are made on a similiarly large and generous scale. He has been known to lift a man of two hundred pounds' weight with the middle finger of his right hand. The thing was done as follows: The man to be lifted stood with one foot on the floor and arms outstretched, his hands being lightly grasped by two friends, one on each side, to preserve the balance of the body. "This slight assistance," we are assured, "had no tendency to raise the body being merely to keep him from toppling over." Cardela then stooped down and placed the third finger of his right hand under the hollow of the man's foot, on which he was balancing, and with scarcely any perceptible effort raised him to the height of four feet, and deposited him standing on a table near at hand. It is said that two powerful Irishmen, living near Verdi, in Washoe County, Nevada, waylaid Cardela with intent to thrash him; but he seized one in each hand, and beat them together till life was nearly hammered out of them. He is, however, of a quiet and peaceful disposition. His strength seems to have been inherited, for he states that his father was even more powerful than he is himself.

Remarkable Case of Early Maternity.—Mr. Henry Dodd, M. R. C. S. Eng., etc., of Rillington, York, writes to the London *Lancet*, that on the 8th of August, 1871, he delivered a joiner's wife of a female child. The babe began to menstruate when 12 months old, at first at intervals of a month or six weeks and subsequently every three weeks. According to the mother's statement she ceased menstruating on the 22d of June, 1880, when she became pregnant. She is an active, hard-working girl, doing all her mother's washing. She has a profuse hirsute growth over pubes and in axilla, and the breasts are large and gorged with milk. In March Mr. Dodd delivered her of a female child weighing 7 lbs. Chloroform was administered, and the labour lasted six hours. The child had only three toes on the left foot; and sometime after birth died of convulsions. The youthful mother is now nine years and eight months old.

To the Medical Profession of the City of New York.—The Board of Censors of the Medical Society of the County of New York request the co-operation of the profession for the enforcement of the existing medical laws.

To this end the Board request physicians who are cognizant of persons practising in this city under fraudulently obtained diplomas, or who practice without any diploma (and this includes prescribing druggists), to forward the name and residence of the offender, the name and residence of the person treated, and the name and residence of the physician making the complaint to the Secretary of the Board, Daniel Lewis, M. D., 147 E. Forty-fifth street, for the action by the Board.

The name of the person making the complaint is required, as a guarantee of good faith, and to show that the charge is not made to gratify private spite. *Anonymous communications will receive no attention whatsoever.*

Hymen in a Primipara.—Dr. Alger W. Rice, of Readsboro, Vt., reports the case of a primipara, aged nineteen, who fell in labor with a nearly imperforate hymen. He says: "In attempting to make the examination, as soon as my index finger passed the labia minora, I came in contact with a tense membrane, which I at once recognized as the *hymen*, which had a small aperture just above the centre, which would not admit the passage of my index finger, and in attempting to do so it gave her intense pain. She at this time informed me that her husband had never had complete copulation with her, and whenever the attempt was made it was very painful. After trying several times to make the examination, I became convinced that my only way was to divide the hymen by means of a scissors, which I did, snipping the membrane on either side of the aperture. The os was found to be well dilated, and the child presented by the breech first position. In two hours more the woman was delivered of a girl baby weighing eight and a quarter pounds." The child was asphyxiated when born, but after much trouble was resuscitated.—*Med. Record.*

DIED.—Dr. J. Dickinson Logan, in Baltimore, Md., April 25th; aged 65. ——Mrs. L. G. Allan, (foster mother of Edgar Allan Poe) in Richmond, Va., on the same date; aged 83.——In Boston, April 23d, James Thomas Fields, the distinguished lecturer, literateur, poet and publisher.

TRANSFUSION OF BLOOD TAKEN FROM A HUMAN BEING AFFLICTED WITH HYDROPHOBIA, INTO THE VEINS OF DOGS.—F. Lussana, of Padua, in Italy, drew blood from a hydrophobic patient by means of a cupping glass applied over leech bites, filtered it and injected the filtrate into the femoral veins of two dogs. Dog No. 1, exhibited after the lapse of 24 hours an abnormal behavior; he became quiet, apathetic, and died on the 26th day. At the post-mortem, besides dark blood coagula in the stomach and colon, nothing of special note was discovered. Dog No. 2, after 24 hours, in contrast with his previous good health, appeared melancholic, and emaciated; there was but very little further change until five months later, when there were indications of pain, then convulsions in the limbs and head; eight days afterwards these symptoms ceased, and the dog remained shy, suspicious, and quarrelsome towards other dogs. He was killed at the end of six months, nothing remarkable in the post-mortem. Dog No. 3, was inoculated with the saliva of No. 1, he remained healthy, as did the experimenter himself, who, during the operation upon Nos. 1 and 2, had wounded his finger, but had immediately cauterized the spot with the hot iron.

Lussana arguing from this record, concludes that there had been a progressive weakening of the virus of hydrophobia, through the successive inoculations (analogous to the results obtained by Pasteur in his experiments upon chicken cholera). The inoculated virus gave rise to melancholia, which had a mild course. This may help to explain the causes of recovery noted in human and veterinary practice. Possibly this also explains the fact that up to the present, no case of inoculation man to man has been observed, while the experiments prove that the rabies poison may be transferred with effect from man to the dog, although under a modified form.—*Centralblat f. Chir. St. Louis Cour. Med.*

COLOR-BLIND RAILWAY OFFICIALS.—An examination of railway *employés* in Brussels has disclosed the fact that five per cent. were color-blind, more or less, and, in accordance with the rules, they have been removed from posts in which the ability to distinguish colors is of importance. This country is much behind others in the matter of such examination, and this may in some degree account for the frequency of railroad accidents, and for errors in reading the signals and managing the points, otherwise unaccountable.

INCISION INTO THE PERICARDIUM.—Rosenstein (Berliner klinische Wochenschrift, No. 5, 1881), has reported a case of purulent pericarditis, in a boy ten years of age, which was treated by incision, and recovered. From this case he draws the following conclusions: First, that purulent pericarditis may occur without fever and without œdema of the cutaneous surface of the chest wall over the heart, and in such cases the character of the exudation can only be settled by an exploratory aspiration. Second, that fear of the setting up a myocarditic process should not be sufficient to prevent the removal of the exudation by an incision.—*Chicago Med. Rev.*

A NEW PRESCRIPTION.—A Galveston man went to the doctor and told him, "Doctor, there is something the matter with my brain. After any severe mental exertions I have a headache. What is the remedy for it?" "The best remedy is to get yourself elected to the Legislature where you will have no occasion to think." The patient replied if it wasn't for the sake of his children he would make the experiment. He didn't want them to go through life with a stigma attached to their names.—*Galveston News.*

NEW YORK'S DEATH ROLL FOR 1880.—Whole number 31,937. From Phthisis pulmonalis, 4,706; pneumonia, 2,822; bronchitis, 1,375; whole number from pulmonary diseases, 8,903, or over 27 per cent of the whole. From small pox, only 31. Typhus fever, only 2. Typhoid fever, 241. Suicide, 152; 121 males and only 31 females. Deaths of children under five years of age, 14,650. Most fatal month, June. Of whole number 3,743 were of German parents, and 3,736 of Irish, these two countries furnishing 7,479 of the whole number. While of American parentage there were only 3,941. From Russia, 119; Italy, 375; Sweden, 67; etc., etc. Deaths from all causes since 1816, 1,010,104. Of this number 146,218 were from "consumption."

The census of the United States for 1870 (which is the latest at hand) shows this disease to be most prevalent and fatal in the Eastern States. The enormous percentage of 25.77 upon the total mortality took place in the State of Maine, 22.21 in New Hampshire, 21.93 in the District of Columbia, 20.17 in Vermont, 20.14 in Rhode Island, 19.94 in Massachusetts, 18.00 in Oregon and 17.92 in Connecticut. The Southern and Southwestern States were freer from this disease than any of the other portions of the Union. The percentage of deaths from this disease to the total mortality was lowest in Arizona. In this Territory the percentage upon the total mortality was 0.40; in New Mexico, 3.81; Nevada, 4.89; Wyoming, 5.40; Florida, 5.78; Texas, 6.07, and Georgia, 6.43.

PAINFUL HÆMORRHOIDS.—℞ Extract of belladonna; ʒ ii; iodoform, ʒ i; acetate of lead, ʒ ss; vaseline, ℥ i. M. S. Apply three or four times daily.

The above will be found a most excellent application for painful or inflamed piles. The tumors should be bathed in cold water just before each application, and the bowels kept freely open with a gentle purgative.—*Medical Herald.*

DA COSTA'S TREATMENT OF SCIATICA.—In a clinic given by Dr. Da Costa, ten cases of sciatica were treated with deep hypodermic injections of chloroform daily, near the seat ot pain. After a few days, if improvement was not marked, a mixture of ten grains of iodide of potassium with two drachms of ammoniated tincture of guaiac was ordered.—*Clinical News.*

TO REMOVE FISH-BONES. — Fish-bones lodged in the pharynx are rendered flexible and are finally broken up by a mixture of hydrochloric acid (four parts) or nitric acid (one part to two hundred and forty parts of water) used as a gargle, the teeth being protected by oil or lard. So says Professor Voltolini in *Nonatsschrift fur Ohrenheilkunde.*

This may be the German method; the American is far superior to it. This is the use of the bristle probang, described in this Journal.

SUPPURATIVE DISCHARGES FROM THE MIDDLE EAR—DRY TREATMENT.—Spencer advises *(Am. Jour. of Otology)*, in place of the hot water douche and and astringent solutions generally used, the dry cleansing with absorbent cotton and the dry dressing with the same, to protect the wound from the air, at the same time that they attract the discharge from the middle ear, and cause a gentle stimulation which conduces to healing.—*Specialist and Index.*

THE SIAMESE TWINS OUTDONE.—An Italian couple, Tocci by name, are at present exhibiting at Vienna a most remarkable specimen of their prodigy, a pair of twins named Jacob and Baptiste. These boys are grown together from the sixth rib downward, have but one abdomen and two feet. The upper part of the body is completely developed in each; their intellectual faculties are of a normal character. Each child thinks, speaks, sleeps, eats and drinks independently of the other. This independence goes so far as to admit of an indisposition of the one without, in the least, affecting the other. They are over three years old, in perfect health, and seemingly in excellent spirits.—*Canada Medical and Surg. Jour.*

THE HEALTHIEST CITIES IN THE UNION.—The first requisite for a home is health. It is officially stated that during 1880 sixty-eight cities of the United States made weekly death rereports to the National Board of Health; and in its bulletin of February 19, 1881, the Board aggregates and tabulates the contents of these reports, exhibiting the results for the year.

From this table it appears that Vallejo, Cal., was the healthiest place reported in 1880, and Norfolk, Va., the unhealthiest. The average life in Vallejo was 83.5 years, and only one person in 1000 of population died of consumption; while in Norfolk the average life was only 27.9 years, and one person in 241 of the population died of consumption. The aggregate population of those sixty eight cities is 7,359,937, the average duration of life in them was 44.5 years, and there was one death from consumption for every 326 of population, and one death from acute diseases of the lungs for every 429 of population. In other words, of every hundred deaths 24.4 were from lung diseases; and of these, 14 were from consumption, and 10.4 from acute diseases of the lungs.

Average duration of life—Vallejo, Cal., 83.5; Yonkers, N. Y., 70; Omaha, Neb., 68; Utica, N. Y., 67.5; Keokuk, Iowa, 67.1; Jacksonville, Fla., 35; Vicksburg, Miss., 34.8; Charleston, S. C., 31.3; Savannah, Ga., 30.6; and Norfolk, Va., 27 years.

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MEDICAL NEWS.

"Nulla dies sine linea."

ILLINOIS STATE MEDICAL SOCIETY meets at Chicago, May 17.——THE CORRESPONDENT of the London *Lancet* reiterates the charges made against the Jefferson Medical College, so indignantly denied by Prof. Gross, that a student may graduate at that Institution without ever having seen a patient. As attendance upon Clinics is entirely voluntary, the charge made is manifestly true.——CHOLECYSTOTOMY.—Dr. Lawson Tait (London) has removed from an unadherent gall bladder one stone entire and crushed another. The patient is well.——FLY TIME.—Doctors can save their noble friend, the horse, great suffering by sponging him with a cold infusion of walnut leaves.——THE JOHN HOPLEIN'S UNIVERSITY Circulars, published at Baltimore, Md., are interesting and valuable.——DRAINAGE TUBES considered a novelty a few years since, were used by the physicians of Philip the Second of Spain in his last illness. ——JURGENSEN regards pneumonia as an infectious constitutional affection; Flint says it is a specific fever; Loomis says it is partly one and partly the other; *quis custodiet ipsos custodies!* ——THE ST. JOHN'S GUILD, N. Y., will begin soon to build a sea-side nursery at Cedar Grove, Staten Island. ——THE AMER. MED. ASSOCIATION met in Richmond, Va., May 3, 4, 5 and 6th.——DR. ISAAC RAY of Philadelphia, died March 31. He needs neither epitaph nor obituary.——

BLOOD LETTING is being noisily advocated in the British Medical Journals and by well known writers.——THE OHIO MEDICAL REVIEW is savagely severe on one of the New York Medical Weeklies. —— CINCINNATI THE FUTURE HOME OF THE AMERICAN MEDICAL ASSOCIATION.—As that City is now the population centre of the United States, would it not be best for the Association to abandon its peripatetic existence and select that City for its future home? Have a permanent building, library, laboratory and its Medical Journal there? What say the Profession?——LABONEHERE very sensibly advises that vaccination should be done above the ankle and not on the arm.——CLINICAL NOTES ON PIGS.—The French are giving clinical facts on pigs when inebriated; the absinthe pig is "gay;" the brandy pig "cheerful;" the rum, "sad;" the gin, "eccentric," etc.; two legs more do not seem to make any difference. ——BERG'S VIVISECTION BILL has so far failed to receive *Legislative support.* When the Tennesee invalid refused (as a last prescription) to go to the Legislature because it would be a lasting disgrace to his family, he was, if not unjust, *a little* too severe. The Solons do show a little sense occasionally, ——CREMATION.—When in the *United States* only one-third of the land is in use, does not cremation seem to be practically absurd?——CADAVERS.—By the new Michigan Medical Act, the Demonstrator of Ann Arbor University becomes the distributor of the cadavers from all state prisons and poor houses, if such cadavers are not claimed in ten days by relatives, etc. ——DR. EPHRIAM CUTTER is now engaged in microscopically studying the blood and discharges of eleven cases of Beri-Beri at the Naval Hospital at this Port.——MR. LISTER has just received Bondet prize (6,000 francs) of the Paris Academy of Sciences for his application of Pasteur's researches to improving the art of healing.——PROF. FORDYCE BARKER, President of the New York Academy of Medicine, will soon present to its library a most valuable collection of works on gynæcology and obstetrics. As a presiding officer his efficiency, popularity and liberality are without precedent.——NUSSBAUM, of Munich, has performed his three hundredth ovariotomy. ——SIR WILLIAM JENNER has just been elected President of the Royal College of Physicians.——THE ENGLISH JOURNALS are in a Kidd and Quain War. Quain is generally censured for consulting with Kidd, the homœopathist, at Beaconsfield's bedside. All commend Jenner for his refusal. —— ONE MORE GOOSE. — An American physician, near this city, lost his life by sucking a tracheotomy tube in a case of diphtheria. A British surgeon who did not lose his life received the Albert Medal for displaying the same piece of fool-hardiness. A Californian Doctor (A. H. Pratt, M.D., of Oakland) did the same thing, and did not either get a medal or a handsome obituary: in fact he complains that he did not even "get a cent." He has gotten, however, what he does not know as yet, the notoriety of doing something egregiously stupid and the condemnation of his brethren for his reckless folly.——THE COUNTRY PRACTITIONER, Beverly, N. J., shows the effect of kind but wholesome criticism; clubs of five can have it at $1.50 from each member, instead of $2 as formerly. The true price, 43 cents, will soon be reached.——THE EDITORIAL BULLS are as much disturbed at the red covers of the monthly as were ever the bulls of Andalusia or Castalia at the red flag of the Matador. Is there truth then in the claims of metempsychosis? And have taurine souls the good fortune to now dwell in the distinguished persons of medical editors. Hughes, of the *Alienist* and *Neurologist*, seems thus hospitable, and the fact explains why his journal is not *red*.——KŒBERLE, of Strasburg, has successfully removed two yards of intestine in a young woman suffering from strictures of the bowels.——A GOOD anæsthetic which has been used so successfully in Vienna that but one death in nine years has occurred consists of the following parts: Sulphuric ether, three parts; alcohol, three parts; chloroform, ten parts.——IT IS estimated that there were 9,000 medical students at the 70 medical colleges of the United States, during the past winter.——A NEW METHOD OF MATRICULATING.—When Dr. Buchanan was matriculated at the Philadelphia Penitentiary his head was covered with a sack before being led to his room. This was done to prevent his knowing the exact locality occupied by him.——WORTH REMEMBERING.—A French journal reports a case of a still born child who after resisting all efforts at artificial respiration breathed promptly when inserted in a bath of 115 F.; and made a good recovery.——DR. CHAS. MACGILL, of Richmond, Virginia, died in that city May 5th. He was in his seventy-fifth year.——THE Medico Chirurgical College (new) of Philadelphia promises to make regular attendance at clinics necessary for graduation. This is something new for Philadelphia. The item is placed therefore in the news department.——CHICAGO is to have another Medical College; the fourth.——THE Toledo, (O.) *Medical Journal* has given up the ghost. Its editors did well; but it seems not well enough.——THE Medical Society of New Jersey met at Long Branch on the fourth Tuesday of May, at 7:30 P.M.——LECOMPTE, a surgeon of French Dragoons, tattoos all of the men of his regiment in such a way, that the proper site for the compression of any wounded artery is clearly indicated. The drummers are quite jealous.——LAST COLLEGE SESSION — Medical Students at Bellevue, 350; University, 750; College Physicians and Surgeons, 555.——THE College of Physicians and Surgeons of this city held its seventy-fourth Annual Commencement at Steinway Hall on May 13th. Particulars in next issue.——THE Kentucky State Medical Society met in April, 1881, in Louisville, Ky. Prof. J. W. Holland is the new President; Drs. C. Mann and C. H. Thomas, Vice-Presidents, and L. S. McMurtrie, Secretary.——MORE Medical Graduates—Columbus, (O.), 63; Cleveland, (O.), 51; Sterling, (O.), 36; Missouri, (Mo.), 119; St. Louis, (Mo.), 43; St. Joseph's, (Mo.), 14; Detroit, (Mich.), 27; Memphis, (Tenn.), 18; Chicago, (Ill.), 45; Albany, (N. Y.), 58; Washington, (D. C.), 5; Georgetown, (D. C.), 5.

THE American Surgical Association, a new organization, held its first regular meeting at Richmond, May 5th. It elected its officers as follows: Dr. S. D. Gross, President; Drs. S. A. Dugas and Jas. R. Wood, Vice-Presidents; Dr. J. R. Weist, Rec. Secretary; Dr. W. D. Briggs, Cor. Secretary, and Dr. J. H. Packard, Treasurer. It then adjourned to meet at Coney Island Sept. 13th, 14th and 15th.

TRANCE FROM FRIGHT.—In the trial of the negro Cadet Whittaker, now and it seems everlastingly going on, Dr. George M. Beard testified, that Whittaker instead of being, as was alleged, by the Court Martial held at West Point, a trickster virtually and "a fraud," was in a condition of "Trance from fright." Dr. Beard has done many unwise and foolish things, but this one subordinates them all. This negro boy had a fair trial at West Point, by an able and kind court-martial, and was declared to be an impostor. Were he a white lad, he would have been summarily ejected from West Point, all would have said that he had received just what he deserved, and no more would have been heard of the silly trickster. But he happened to be a negro. Afraid of political pressure, Mr. Hayes foolishly and weakly granted him a new trial. The claptrap displayed in this contemptible political farce is disgusting indeed, but that the Medical Profession should become conspicuous in it is lamentable and pitiable.

MEDICAL ASSOCIATION OF GEORGIA.—The Thirty-second Annual Session of the Medical Association of Georgia, was held in Thomasville, on April 20th and 21st, 1881. The following are the officers for the ensuing year: President, William F. Holt, Macon; First Vice-President, Eugene Foster, Augusta; Second Vice-President, T. M. McIntosh, Thomasville; Secretary, A. Sibley Campbell, Augusta; Treasurer, K. P. Moore, Forsyth.

The next session will be held in Atlanta, on the third Wednesday in April, (19th) 1882.

Communications should be addressed to A. Sibley Campbell, Secretary.

AN ACT relative to the employment by Railroads of persons affected with Defective Sight or Color Blindness.

Be it enacted, &c., as follows:

SECT. 1. No railroad company shall employ or keep in its employment any person in a position which requires him to distinguish form or color signals, unless such person within two years next preceding has been examined for color blindness or other defective sight, by some competent person employed and paid by the railroad company, and has received a certificate that he is not disqualified for such position by color blindness or other defective sight. Every railroad company shall require such employeé to be re-examined at least once within every two years, at the expense of the railroad company.

SECT. 2. A railroad company shall be liable to a fine of one hundred dollars for each violation of the preceding section.

SECT. 3. This act shall take effect on the first day of July next. [*Approved April 11, 1881, Boston, Massachusets.*]

"STILL THEY COME."—*The Sanitary News*, Vol. 1, No. 1, has just been received. The Journal is so far therefore a number one publication. It is a 32 single-page monthly, published by Drs. R. C. S. and C. A. L. Reed, of Hamilton, Ohio, for $1.00 a year. It is placed on the exchange list with good wishes for the success of the editors.

THE *Medico Chirurgical Quarterly*, Vol 1, No. 3, is also received. It is a quarterly of 100 single-pages, published by Drs. John Butler and Geo. M. Dillon, of N. Y., at $3.00. It is also put on the exchange list, and the editors will, it is hoped, be prosperous and happy. So mote it be.

TYPHUS FEVER is rapidly increasing in this City. The disease was introduced chiefly by immigrants, who are arriving in numbers unprecedented, (often 3,000 a day,) but it is unquestionable that some cases have been developed *ab initio*, by the foul streets and dangerously foul tenement rookeries.—The Health Board of the City is manifesting marked neglect, or still more marked want of force and efficiency.

ALARMING INCREASE OF MORTALITY.—The number of deaths in the City of New York for the first quarter of 1880 was 6,802 ; the number for the first three months of the present year is 9,105 ; an increase of 2,302 ; over 33 per cent.! ! !

FORGOTTEN BY DEATH.—Old Professor Chevreul, aged ninety-five, has just completed a course of forty lectures on Chemistry.

THE Association of Medical Editors met at Richmond, May 3d, and, after listening to Dr. Shrady's address, elected Dr. L. B. Edwards President; Dr. Ralph Walsh Vice-President, and Dr. D. S. Reynolds, Secretary, and then—adjourned until next year.

REGISTRATION.

BORN.

On April 9th, 1881, to the Wife of DR. FRANK PASCHAL, of Chihuahua, Mexico, a son, EDWIN GAILLARD PASCHAL.

EDITORIAL.

" Nullius addictus jurare in verba magistri."—HOR.

BUSINESS NOTICES.

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ASSOCIATION MEDICAL JOURNAL.–There seems to have been a disposition on the part of the Association to establish its own Medical Journal, and a committee charged with establishing such a work was appointed.

It is to be hoped that the rank and file of the great Medical Army will not be deceived by the *ignis fatuus* which has been so far displayed. Mature reflection on the part of all who have had any reliable Journalistic experience (and these only are competent to give testimony) would clearly demonstrate the impossibility of establishing such a Journal under the circumstances surrounding such a periodical, and under the inseparable difficulties to be herein described.

Of course there are hundreds who will fall in love with such a scheme, but unless these know by experience of what they prophesy and speak, their testimony is manifestly even worse than worthless; it is dangerous. Editors only can give reliable views in regard to this matter; for they only know of what they testify. One might as well take the testimony of an Apache, or a Sioux, in regard to the electric light, or the views of a landsman as to the actual course of the Kurosiwo in the Northern Pacific, as to receive at any value the opinions of the inexperienced and uninitiated in regard to the actual working of a Medical Journal. And if the views of editors are taken, it is probable, indeed almost certain, that there will not be one of any competency who believes that the establishment of such a Journal is feasible, or possible.

In the first place there is not an editor now before the Public and fit for this work who would either abandon his own Journal, or take, with the conditions annexed, the pcsition offered; and to give it to one who had to learn his business would be to court the most overwhelming loss and serious disaster.

Of course most men believe that they are by nature splendid editors, and that, with the opportunity offered, they would at once demonstrate how incompetent are all others engaged in such work. But such is not the opinion, in regard to them, of those who only are able to give an opinion of any value. All editors will testify that even when there is an inherent talent and fitness for such work, it can only be made effective and successful after a long, arduous and expensive experience.

It would not be practicable then to secure a veteran; a recruit would entail a quick and overwhelming failure.

It is said that the advertising patronage of such a Journal would be sufficient to pay its expenses. But this is said only by those who know nothing of such business, or of what they are speaking. Such a result in the far future of possible success might be achieved, but to assume it as a basis for present and immediate work is a manifest business absurdity.

A circulation so large as to command a remunerative advertising business can of course be obtained by a vast outlay of money for a long time, but no one would advise so ruinous a course for a possibly favorable result.

There is but one other basis on which to expect or predicate a circulation large enough to secure a lucrative advertising business, and that basis is the ability of the editor. Such an editor must have had large experience and must be a man who would demand absolute editorial independence, absolute editorial autocracy, as an inseparable condition of his contract.

He must be the master of his work and his ruling in the conduct of the work must be supreme. No man of ability or desirability would in such a position, and in a work of such great responsibility decide otherwise; he certainly would not be a clerk to carry out the behests of others; and if he could sink to this position, he would no longer be a fit guide or editor.

The Association is not ready to be ruled by its editor; and an American Association never will be. No editor would be ruled by the Association; and to be a safe editor and one worthy of respect he never could be so ruled.

There cannot be two masters. The Association demands that it shall be one; and with such a demand it would look in vain for an efficient or even respectable editor. A safe editor would insist on being master; and with an American Association, this would never be conceded. If there can be no master there can be no success.

Of course there will be found, and without the least trouble, any number of pliant tools, and pitiful sycophants who would be glad to occupy such a position; men ready, "to bend the pregnant hinges of the knee, that thrift may follow fawning"; and such men will even stoop to seek such a place, but they are not of the stuff which can secure even respect for such a Journal; far less could they command success.

The place may be given to some Pet of the Association, but such a step would ruin not only the Journal, but the Association itself; and deservedly.

Lastly no one fit for such a position would accept it, unless it were guaranteed for a term of years, at a liberal salary, and with the incumbent made, by the conditions of the contract, absolute and final judge not only of the manner in which the Journal should be conducted, but of all papers offered for publication in its columns. Can an editor of ability and experience be found who would accept this office without such guaranteed tenure, powers and remuneration? Certainly not. If found would the Association grant these, and make him master? Assuredly not. If the terms essential for success are then not to be received and given, failure is certain and unavoidable.

No one of self respect will ever become a caudal appendage to be wagged at the pleasure of the corporate Body thus handsomely developed; and such a Body will never consent to be wagged by the caudal excrescence to which it gives existence and support. Who is to be the wagger, and who the wagged? Important questions, for there must be an answer to both before there can be even a trial of *The Association Medical Journal!*

THE AMERICAN MEDICAL ASSOCIATION appears, from the excellent reports made by Dr. Edwards of the *Virginia Medical Monthly*, to have had scientifically a very uninteresting and also valueless meeting; while socially, doubtless, it had one of the most enjoyable on record. The number of prominent physicians was apparently far less than usual; and the States were represented to a very limited extent. Alabama had (by the report) two representatives; California two; Georgia five; Kansas two; Louisiana one; Maine two; Minnesota four; Mississippi one; South Carolina two; Tennessee three; Texas three; and Vermont one; thirty-nine representatives from twelve States; an average of a little over three from a State!! Some of the States were more largely represented, but the attendance seems, by the published list, to have been very small, and to betray a very limited interest on the part of the Profession. The scientific work done by the Association proper is absolutely not worthy of mention. The Code of Ethics and amendments to it seem to have subordinated all questions of actual interest and importance. The officers elected are excellently chosen. The Sections do not seem to have done any work worthy of the occasion, or of their organization. Their debates, as published, do not manifest even that average usefulness or strength often seen in the meetings of small local societies.

The Association seems to have lost its usefulness and strength; and the interest manifested in it is yearly smaller and more limited. It generates and invites and secures no new elements of strength. The debates are on the same old hackneyed and time-worn subjects; of no earthly scientific value or importance; and the list of speakers remains from year to year about the same. There is no new blood in the Body, and the circulation of the old is sluggish and weak. There is no disguising the fact, if the truth be told (as it should be openly and frankly told) that the Association has lost its hold on the brain and heart of the Profession; it is tolerated rather than sustained; and propped from falling, rather than developed and improved. Its next meeting must necessarily be small and insignificant, and for the next two years, its course can not be otherwise than humble and obscure. There is something conspicuously wanting to develope this most important organization. What is it?

THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES.—The readers of this Journal are well aware of its long entertained doubt as to the reliability and efficiency of this organization. It was originated chiefly through the action of the Jefferson Medical College of Philadelphia, which, though receiving from year to year the honor of its Presidency, has conspicuously refused to sustain it. It was godfathered by the College of Physicians of New York, which has long since abandoned it. And it was dry-nursed for awhile by Bellevue, which has repudiated it.

Through several years of unsteady and feeble existence, it has tottered along, repudiated by many; ridiculed by more; and distrusted even by it alleged supporters. Its downfall has been predicted by this Journal, almost as often as its inefficiency has been demonstrated. And now what is the last manifestation of its vitality, reliability and genuineness? It met *once* at Richmond, Va., when the Jefferson Medical College declined any longer the honor of its Presidency!! New officers, Dr. J. M. Bodine, of Louisville, Ky., President; Dr. Briggs, of Nashville, Vice-President; and Dr. Leartus Conner, Secretary,(all excellent gentlemen), were elected; *it then hopelessly adjourned, and never succeeded again in obtaining a quorum; and the last abortive effort at a meeting was adjourned subject to the call of the President!!* When one remembers what this noisy and curious little Body promised to do; what its fulminations and resolutions and fuss have been, and reads now of the pitiable result, he can only exclaim *montes parturiunt et nascitur ridiculus mus ! !*

"No Agreement Possible and Compromise Impossible."—The general Public ridicule the rules governing physicians; terming them foolish and absurd; and very many physicians denounce the ethical laws of their own Profession, repudiating them as fantastic and impracticable. But every now and then there occurs something to show that these rules are founded on equity and sound judgment; and that under them all, there lies the broad sub-stratum of principle and right.

The most interesting illustration of these facts has just occurred and so conspicuously as to compel universal attention.

It will be remembered that when Lord Beaconsfield became so ill as to demand additional professional advice, his medical attendant, Dr. Kidd, a homœopath, at the request of "Her Majesty," desired Sir William Jenner to attend, with him, his distinguished patient. Now nothing in ordinary practice could have been more desirable to any physician. The exalted position of the patient; the wide-spread knowledge of his illness: the daily announcements in the secular Press of the world of the patient's condition ; the desire, indeed the request of a sovereign ; the certainty of largely increasing his professional practice by the notoriety thus gained ; and lastly the princely pecuniary reward were each a sufficiently potent inducement to tempt almost any physician into acquiescence, and when taken together were strong enough to have tempted most men to comply with the request made. But Dr. Kidd was a homœopath, and Sir William Jenner repudiated utterly the medical tenets which Dr. Kidd represented. His reply, fully anticipated by his friends, was, one which every physician should prize, and of which the Profession may be justly grateful and proud. "I must decline the request," said Sir William Jenner, "for between us no agreement is possible, and compromise with me is impossible."

It must have been a beautiful, as it was a memorable spectacle. Nothing in the history of medicine is more noble and elevating ; not even the picture in which the Persian Monarch Artaxerxes is represented as sending his ministers to Hippocrates with all the offers of wealth and rank and station, to bribe him from his allegiance, while the noble teacher of Cos waives them away with refusals and reproaches and scorn.

That Sir William Gull should mildly also have refused is not less gratifying ; but that Dr. Quain should have accepted the call and discharged the demands of his position, until the death of his great patient (April 19th) is mortifying and astounding.

But when foolish men among the laity shall scoff at physicians for their alleged Quixotic laws, and physicians shall basely stoop to ridicule and even to repudiate their own ethical obligations, the historical reply of Sir William Jenner to the Homœopath will long be quoted with pride and admiration, "I must decline, for between us no agreement is possible, and with me compromise is impossible." The triumph of principle over all the wiles and seductions of policy. It commands, for the Profession of medicine, the admiration of all.

Clinics.—In a few weeks the medical colleges will issue their catalogues. It is hoped that these will give assurance of clinics of real value. Clinics as at present conducted are mere shams, if not frauds. All cases of acute disease remain in the wards and are not seen. The chronic cases are brought into the amphitheatre and with these as texts the classes are given didactic lectures. The patients might just as well be in the wards. Close inspection, palpation, percussion, auscultation, tongue and pulse testing, and every semblance of honest and actual examination are impossible. Operations in graver and minor surgery, practical ophthalmology and gynæcology are, as conducted, almost useless; they can not be seen by the class.

The small in-land colleges really give, in this respect, and in all other respects, to their classes all that these receive in the largest institutions. The great medical centres can give true and honest clinics, for they have the material in abundance. If they do not and will not adopt this course, students will not sustain them, but will do that dreadful thing, "go West."

It is pitiable as well ludicrous to witness "a clinic" on pneumonia or cardiac disease; and one might as well ask that the Kohinoor should be admired in a rat hole, as to expect a student in the amphitheatre to practically learn any thing from witnessing an operation for vesico-vaginal fistula, or erosion of the os-uteri. Every honest teacher must admit that clinics as at present conducted are shams.

The college which will "make a new departure" and give genuine clinics will reap a harvest. *Verbum*, *sap*, *etc.*

A SUGGESTIVE FACT.—It will be found that those who advocate, in connection with medical college education, a preliminary examination; a graded course of three years; an examination at the end of every session; and an attendance upon three long sessions as a requirement for graduation are chiefly writers, teachers, "or organs" connected with endowed medical colleges. Small classes as a proximate result do not lessen the remuneration of these teachers. It is all great prestige, full remuneration, no risk and a general ovation. The endowed colleges will do well to note all this and remember it.

BROCA'S LAW in regard to the localisation of the faculty speech seems to be entirely subverted by the recent discoveries of Charcot. It will be remembered that Broca located this faculty in the posterior portion of the third convolution of the left anterior lobe; while according to Charcot the faculty of speech appears to be in the right half of the cerebrum. See the article on Catalepsy in this number.

NERVE STRETCHING is leading to dangerous manifestations of disturbed nutrition; shrivelling of the limbs; spontaneous amputations of fingers and toes, etc. It can not, as has been done, be employed without great caution and circumspection. Cases reported to the Biological Society of Paris should serve as a timely warning.

THE MUCOUS MEMBRANE OF THE UTERUS is said by many gynæcologists to be discharged during each menstrual period. The *Gazette des Hopitaux* (March) contains an article by Sinety, showing that autopsies performed during and after menstruation fail to support this theory in any manner, and that the most careful examinations of menstrual blood have failed to show any traces of the uterine mucous membrane!!

HOSPITAL LIBRARY.—The movement to furnish every hospital with a library for the benefit of the patients is excellent. Every family could and would contribute many volumes.——THE Chicago *Medical Journal*, which is always so serious and proper, gives issue to a very obscene jest; it says that Sarah Bernhardt is so thin, that when she takes a pill she appears to be pregnant.

TRICHINOSIS AT BELLEVUE.—Dr. Janeway reported to the Board of Health April 9th, a case of trichinosis in Bellevue Hospital. A man named Yager had been removed to the institution from a hotel in Greenwich street, ten weeks ago, and, although suffering acutely, the physicians for a while were unable to diagnosticate his case. Dr. Janeway, however, ascertained the nature of the disease when he cut some trichinæ from the patient's muscles. It was learned then that previous to his prostration Yager had eaten a quantity of boiled ham, which was not well cooked, and which doubtless contained the trichinæ.

This fact illustrates the truth of the claim recently made in this Journal, that when meat is actually boiled until "well done" the heat acquired at a distance from the surface of the meat is not nearly sufficient to ensure the death of the trichinæ.

HOMŒOPATHY.—*Similia Similibus Curantur:*

There was a man in our Town,
And he was wondrous wise;
He jumped into a briar bush,
And scratched out both his eyes.
And when he found his eyes were out,
With all his might and main,
He jumped into another bush,
And scratched them in again.
—MOTHER GOOSE.

DR. J. J. JONES, who originated the Arkansas *Medical Monthly*, moved it in January, 1881, to Memphis, Tenn., and after issuing number III. of Vol. I., abandons the work, "because it is not consistent with his inclination or professional interests to devote further time to the enterprise." He says that the Journal is "a fixture in the land." Dr. Julius Wise, the other editor, is so wise as to decide otherwise; he will "stand by the ship," and "hold the fort."

BAD NEWS FROM MEMPHIS.—The Waring system of sewerage introduced at Memphis, with such bright hopes and sanguine expectations, does not seem to do as well as was anticipated—bones, chips, sticks, etc., are sufficient to obstruct the flow through the pipes.

KIDDER & LAIRD, of New York, offer four pages of advertisements in this Journal which deserve the attention of all readers. There is no House in this country which stands higher, and is more worthy of confidence. Their Saccharated Pepsine and Hydroleine are remedies well sustained, as they demonstrate, by abundant testimonials, and these remedies deserve the attention of every one.

ASSES IN THE OLD TIMES AND THE NEW.—A Western Medical editor is continuously merry over the views expressed by this JOURNAL in regard to the return of Bellevue Medical College to its old terms. Well times have changed very sadly. In the good Old Testament days, it was considered a miracle for an ass to speak, but now it is a miracle when he is quiet.

ART AND QUACKERY.—A religious paper publishes a curious picture which excites much comment and dispute. It is one in which a robber is apparently levelling a deadly weapon at three merry individuals unwarily approaching him; but close inspection reveals the fact that the mysterious robber is St. Jacob, and that the weapon is a bottle of his electric oil, which he is "trying hard" to sell to the amused and laughing by-standers. The mistake seems at first to be very great, but, on reflection, the last act is more fatal than the first.

A GOOD ITEM FOR LOW FEE MEDICAL COLLEGES.—Thirty years ago it cost Massachusetts $4.81 to educate each child; now it costs $13.55. What is remarkable is that the ablest men of the old State were educated at the former rate. Her latter sons are in comparison but pigmies.

AN EXPLODED ERROR.—Early to bed, early to rise was the old receipt for good health and long life, but Figaro laughs at this old rule. It says that Emile Girardin the great French Journalist, arose always at four and now—he is dead. It adds that this is a sad lesson, and that Doctors should not forget such a warning.

MORTALITY STATISTICS.—It has been found (on the authority of the American Tract Society) that the number of good boys who die early, compared with the bad boys who live a vigorous life, is simply appalling!! The attention of the National Board of Health is called to this important fact. There is but one radical means of relief. It is to quarantine all the Sunday Schools.

DELAY OF THIS NUMBER.—This number has been much delayed on account of the desire to publish in it all of material interest in the proceedings of the American Medical Association; and also by a very recent death in the family of the editor.

GAILLARD'S MEDICAL JOURNAL.

(Formerly the Richmond and Louisville Medical Journal.)

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ORIGINAL ARTICLES.

"Qui Docet Discit."

OVARIOTOMY WITHOUT A CLAMP OR CARBOLIZED SPRAY. REPORTED by PHILIP GRESHAM M.D., of Jacksboro Texas, at the Meeting of the North West Texas Medical and Surgical Association in Eastland City, Texas, May 3rd 1881.

I was requested about the 10th of Nov., 1880, by Dr. Ginn to see a Mrs B., aged 30 years, the mother of three children one of whom she was nursing at the time I first saw her. I found her somewhat anæmic, the abdomen distended as much as is usual at the eighth month of pregnancy, the skin sallow, urine scanty and highly colored but free from albumen, bowels costive appetite variable, pulse, rate and temperature normal, and the respiration slightly hurried, The patient had suffered little pain except from the distention of the abdomen which she had first noticed about seven months before I saw her, and which had rapidly increased for the past two months. An examination showed the abdomen most prominent at a point about two inches above the umbilicus and an inch to the left of the linea-alba; percussion enabled me to detect distinct fluctuation at several points. Introducing into the uterine cavity Sims's probe I found it could be moved independently of the tumor, There being no œdema of the extremities or any evidence of cardiac, renal or hepatic disease, indicating ascites, I diagnosed a multilocular ovarian cyst.

In consultation with Drs. McClure and I. C. Cornelius of this place paracentesis was determined on, as a means of rendering assured the diagnosis and to relieve the pressure on the abdominal viscera which was rapidly deteriorating the patient's general condition. An aspirator being chosen for the purpose, I succeeded in drawing off about a gallon of a thick translucent and highly albuminous fluid of a slightly green tint. The operation was followed by much improvement in the patient's general health. The tumor could now be plainly felt to move under the abdominal parietes. The multilocular character of the cyst was plainly demonstrated by the fact that the removal of a gallon of its contents only reduced its size locally, not generally, as must have been the case had it been unilocular.

The reäccumulation of the fluid in the cyst was very rapid, and judging from the increased distention of the abdomen must have amounted to at least two pints in the ten days, immediately following the operation. Under these circumstances there was no alternative but ovariotomy.

The external conditions surrounding the patient were most unfavorable, the room in which the operation was to be performed was very open, the weather inclement and no proper means for heating the room at hand; under such circumstances I should have declined to operate, if the pecuniary circumstances of the patient's friends would have permitted her removal to some hospital or other point where the operation could have been performed under more favorable conditions. I however consented to operate at the earnest solicitation of the patient herself, after all the facts had been plainly presented for her consideration.

The operation was performed on the seventh of December with the assistance of Drs. McClure, I. C. Cornelius and Burns of this county. Sulphuric ether being chosen as the anæsthetic, the incision extended from one inch below the umbilicus to about one inch above the symphysis pubis. After all bleeding from the abdominal parietes had ceased, the peritoneum was opened, upon a grooved director with scissors; the cyst was found to be unusually large and it was very thick which forced me to lengthen the incision to about one inch above the umbilicus carrying it to the left to avoid the round ligament of the liver. I next drew off a sufficient quantity of the contents of the cyst to make room for the introduction of my hand into the abdominal cavity (with the aspirator) for the purpose of breaking up the attachments which I succeeded in accomplishing without instrumental aid, although the cyst wall was firmly attached to the inferior margin of the liver. Finding that the remainder of the contents would have to be withdrawn before the mass could be brought out of the incision, I turned the woman on her right side far enough to prevent the possibility of any effusion into the abdominal cavity, and drew a portion of the cyst out, until it protruded two or three inches from the abdomen, when the remainder of its contents was drawn off with trocar and canula; after being emptied the collapsed sac was easily drawn out of the abdomen. The pedicle not being more than two inches long, I considered it impracticable to attempt to fix it in the external wound after the manner recommended by Hutchinson, and accordingly I secured it by double ligature, using for that purpose the carbolized catgut ligature. After applying as a styptic the liquor of the persulphate of iron until all bleeding from the stump had ceased, I cut the ligature off close to the knots and returned the pedicle to the abdomen. I next sponged out the abdominal cavity with a two per cent solution of carbolic acid at a temperature of 99° F. The wound was then closed by quilled sutures of silver wire as recommended by Kœberlé, and to insure the accurate apposition of the external edges of the wound, pins were inserted and wrapped in figure of 8, after Thomas's method—after dressing the wound a flannel bandage was applied over the entire abdomen. On examination the cyst was found to contain about 20 small ones, from the size of a marble to that of an egg. The after treatment consisted in administration of opium in sufficient quantities to insure quiet and to prevent any action from the bowels. The bladder was relieved by catheterization as required. The recovery of the patient was both painless and rapid, at no time after the operation was the temperature higher than 102½° F. The instruments, sponges, etc., used were thoroughly disinfected by a 2 per cent. solution of carbolic acid, but no carbolized spray was used.

The inference to be drawn from the above facts are first: That unfavorable conditions surrounding the patient unavoidable in rural districts, while of course they materialy affect the prognosis, do not contra-indicate the operation. Secondly: That the removal of a large proportion of the contents of an ovarian cyst by paracentesis at least ten days prior to ovariotomy is a very valuable means of rendering assured the diagnosis, and is the best means of improving the patient's general condition at our command.

While the writer does not hold to the opinion expressed by Professor A. Hegar of Freiberg, in a late communication to the Society of German Naturalists, in the Gynæcological Section, that the carbolized spray is a disadvantage, he considers that late statistics of gastrotomy with strict antiseptics show as favorable results without the spray as with it, so that if not harmful it is at least superfluous.

THE PHYSIOLOGICAL EDUCATION OF IDIOTS. By CHAS. H. S. DAVIS, M.D., Meriden, Conn.

Idiocy is characterized by the absence or arrest of development of the intellectual and moral faculties. This depends upon mal-nutrition or diseases of the nervous centres, occurring either before birth or before the evolution of the mental faculties in childhood. It incapacitates mostly the functions which give rise to the reflex, instinctive, and conscious phenomena of life ; consequently the idiot has but little, if any, control over his will, understanding, feelings, or movements. Idiocy bears much resemblance to the ordinary condition of infancy. The word imbecility is generally used to denote a less decided degree of mental incapacity. Idiocy should not be confounded with dementia. Idiocy begins with a low amount of intelligence, which gradually increases. Dementia begins with average intellingence, which gradually diminishes ; it is an impairment or total loss of mental powers that have been once possessed. This occurs at a later period of life, and is always the result of diseased action of the nervous system. For the purposes of study, idiocy has been reduced to classifications more or less arbitrary. It is also necessary to separate many of the classes into which the cases may be divided, for the purposes of training. In 1846, the late Dr. Edward Seguin published in Paris, a work which threw a new light upon the classification of idiots.* Previous to the appearance of this work, Esquirl† and others contented themselves with the two classes of imbeciles and idiots, and divided them into those who could use words and short phrases ; those who could only utter monosyllables and certain cries; and those who had neither speech nor monosyllable. Dr. Seguin laid the foundation of his classification in the assumption that the mental and moral features of idiocy were dependent upon conditions of the nervous system. He therefore proposed a classification based upon the seat or location of these underlying physical conditions. The remote cause or source might be physiological or pathological ; the immediate cause or source might be physiological or pathological ; the immediate cause was in abnormal conditions, either of the central nervous masses or in the nervous apparatus radiating from these centres, and which connect them with the individual environments. Dr. Seguin divides idiocy into two classes. 1st. The chronic affection of the whole or part of the central nervous masses, which is characterized by profound idiocy. 2nd. A partial or total affection of the nervous apparatus, which ramifies through the tissues and presides over the life of relation, the result of which is superficial idiocy. He describes, under the title of "backward children," a class of cases where there is a retarded mental development in childhood, which may be said, briefly, to result from a mere functional torpidity of the nervous system. Referring to the fact that all the forms of idiocy may be accompanied by various maladies, he says: "Idiocy and imbecility can be, let us always bear in mind, simultaneous with various particular states, like hemiplegia, paraplegia, epilepsy, etc., all special affections which the medical man should be able to diagnose by their symptoms, evidently distinct from the conditions of the nervous system proper to idiocy. These complications aggravate the primitive infirmity, without doubt, but it is not necessary to confound them with it." Dr. Seguin also describes an endemic idiocy interwoven with alpine or lowland cretinism and bronchocele. This form besides its apparent geological connexion or origin, is hereditary, like scrofula; a taint in the blood, preparing children for idiocy or imbecility, according to the age of its invasion. Dr. Hack Tuki* proposes a physiological division of idiots into, first, those who exhibit only reflex or excito-motor movements; secondly, those whose acts are sensorimotor and ideomotor; and thirdly, those who manifest volition. It is a division which is not perhaps practically available, but seems to mark the different degrees of degeneracy. A recent writer, Dr. Ireland, has offered a classification based upon pathology. He says, "coming to the study of idiocy after having gained some experience in medicine, I have from the begining viewed it from the stand-point of pathology, and my idea of idiocy is compounded of the following classes, which are generalized from individual existing idiots, who resemble one another by having the same or similar diseases as they reremble the type of idiocy by having mental deficiency along with a corporeal disease." *

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* Traitement Moral, Hygiéne et Education des Idiots. etc. Paris. 1846.

† Observation pour servie à l'histoire de l'Idiotie. Dans les Maladies Mentales. Paris. 1828.

1. Genetous Idiocy.
2. Microcephalic Idiocy.
3. Eclampsic Idiocy.
4. Epileptic Idiocy.
5. Hydrocephalic Idiocy.
6. Paralytic Idiocy.
7. Cretinism.
8. Traumatic Idiocy.
9. Inflammatory Idiocy.
10, Idiocy by Deprivation.

The causes of idocy are many. Idiots are frequently born in families in which there is a decided neurotic tendency, as manifested by the appearance of insanity, imbecility, or epilepsy amongst its members. The children of epileptics are frequently insane, or idiotic, or hysterical, and the descendants of an insane person are often epileptic, or idiotic, or insane, or this epilepsy passes into insanity, or epilepsy supervenes upon the idiocy. Deaf-dumbness, chorea, locomotor ataxia, hysteria, and other disorders of the nervous system, now and then occur in the descendants, apparently as the result of an inherent neurotic tendency in the family stock. Idiocy is of all mental derangements the most frequently propagated by descent. Dr. J. Langdon Down has made inquiries into the causes of idiocy in 2,000 cases,† and found that in forty-five per cent. there were well marked neuroses in the families of one or both parents. If neurosis were marked on the mother's side, the first children were the most affected. If on the father's side, he found it was the later born children who were affected. Intermarriages in families lead to a degeneration that manifests itself in deaf mutism, albinoism, and idiocy. The records of the royal houses of Europe, notably of the Spanish branch of the house of Austria affords examples of the evil effects of this custom. Dr Ray* says that consanguineous marriages repeated through successive generations account for the numerous instances of insanity and idiocy occurring in quiet rural populations of New England, far from the excitements of city life which are generally supposed to be more productive of mental unsoundness. Dr. S. M. Bemiss, of New Orleans Louisiana, giving a report of the condition of the offspring of 580 intermarriages of first cousins, gathered mostly by medical men as from nearly every State in the Union, says: 2,778 children were born of these cousins, of whom 793 were defective, 117 deaf and dumb, 63 blind, 231 idiotic, 24 insane, 44 epileptic, 189 scrofulous, 53 deformed, and 637 died early.† According to Dr. Howe,‡ parental intemperance and excess occupy a high place as causes of idiocy. There is a wide-spread notion that idiocy is in a large number of cases the special mode in which the sin of the drunkard is visited upon the next generation. But statistics do not show that intemperance of parents has that causation of idiocy that Dr. Howe and others try to prove. The children of drunken parents in many cases have an unhealthy nervous system ; they are weak, unsteady and excitable, and often have a diseased craving for spirituous liquors. As Dr. Ireland says: Alcoholic intoxication has a lowering effect upon the constitution which may lay the foundation of idiocy or neurotic disease, bringing idiocy in their train. Perhaps two-thirds, or even more, of all idiots are of the scrofulous constitution. Physicians connected with asylums for idiots are often called upon to treat the different local and general manifestations of the scrofulous diathesis, such as enlarged or suppurating glands, skin eruptions, ophthalmia, otorrhœa, strumous ulcers, and abscesses, and fully two-thirds of all idiots die of phthisis. There is a larger proportion of scrofulous or weakly parents who have idiotic children, than of healthy parents who have idiotic children. During fœtal life great fright or mental agitation in the mother, or irregularities and excesses on her part, may lead to mental defect in the child. Another frequent cause of idiocy is an arrest of mental development after birth up to the third or fourth year, owing to epilepsy, the acute exanthemata, perhaps syphilis, and certain conditions of bad nutrition, such as are produced by over-crowding, bad diet, and want. Previous to 1837 but little progress had been made in the education of idiots. The eminent philosopher and surgeon Itard had adopted a sytem founded in physiology, as he labored to develop the intellectual faculties of his pupils by means of the sensations. At his death his pupil, the late Dr. Edward Seguin, entered upon the work as a labor of love, and devoted several years to a thorough research into the causes and philosophy of idioocy, and the best methods of treating it. Dr. Seguin organized a school for idiots in 1838. His intelligence, skill, and zeal, together with a happy faculty of presenting his principles and method of instruction and the results, attracted great attention, and the public authorities of France and scientific bodies acknowledged the merits of his system. It has been found that ordinary teaching and education are not possible. If these unfortunate beings are to be taught anything useful, it must be by other means than those usually adopted at schools. The treatment must proceed more from the training of the senses, in order to improve the mind, than from the education of the mind in view of developing the senses. The mind has to wait until the body has been strengthened, its defects assisted, its muscles taught to act, and its functions regulated. For idiocy or imbecility is not simply mental deficiency or inertness, to be removed or improved by a special course of teaching adapted to a low mental state, but a deficiency of nervous functional power, the result of various diseases of the brain and nervous system, and often associated with, and in some measure dependent upon, a feeble constitution. Each function is to be trained with especial reference to the peculiarities and deficiencies of the individual, and also in its relation to all other functions, with a view to a harmonious whole. In the feeble the tone of health is to be raised; in the scrofulous the constitutional defect is to treated; in the epileptic the number of fits, must if possible be diminished or made to cease entirely. Slow and torpid idiots require a different treatment from the restless, irritable, and timid cases; the imbeciles with chronic diseases of the brain, the epileptic and hydrocephalic cases must receive special attention, and have special dietaries and rules. The training of the body by applied gymnastics and special exercises are invaluable, and are first to be taken into consideration. Their use is to develop the simplest powers of movement, to enable them to stand quietly, to imitate correctly, to become accustomed to obey and to cease from antics and bad habits in walking. The child may be unable to use the muscles of its body from several causes; from utter stupidity and incapacity to direct the complicated machinery of the human body, or from a deficiency of nervous or muscular power. The legs, if they do not bend, may be made to yield by placing the child in a baby-jumper; if the feet refuse to step, they may be taught by making them encounter, with the regularity of a walk, a spring board which alternately receives and throws them back; the gait is regulated by the use of dumb-bells and by condncting the child between the rounds of a horizontal ladder or over planes of various inclinations and conditions of surface, representing the principal difficulties likely to be encountered in nature. The hands are taught to grasp by clasping them about the rounds of an inclined ladder and requiring them to support the weight of the body, or by the use of the balancing pole, which is thrown back and forth between the child and the teacher. As a general rule idiots speak according to the measure of their ideas, and the more intelligent speak best and use most words. Some, with considerable powers of attention, mental perception, and memory, are quite dumb. The only way to teach them to speak is to cultivate their perceptive faculties, and try to increase the growth and nutrition of the brain and other organs. As their mental faculties improve words come. The senses of touch, sight, smell, taste, and hearing are to be cultivated and brought out in like manner, and as each sense or organ is carried progressively toward the normal performances of its function, new avenues from without are opened by which ideas, at first concrete, but afterward more abstract, are instilled into the mind. After the training of the body has been pursued for some time, and after the powers of attention and imitation have been developed, direct mental training should commence. As the feeble-minded can never acquire much knowledge, and as training to usefulness in the poorer cases and self-amusement in the richer should be aimed at, rather than attempting any great acquirements, direct mental cultivation should only be pursued to a very limited extent.* Without moral training mere education of the intellect would only render imbeciles more mischievous and cunning. Imbeciles can be taught the simpler moral relations just like children, and they have no vicious habits unless corrupted by others. In the words of Dr. Seguin, we must never confide to automatic memory what can be learned by comparison, nor teach a thing without its natural correlations and generalizations ; otherwise we give a false or incomplete idea, or none, but a dry notion with a name ; what enters the mind alone, dies in it alone ; loneliness does not germinate anything: The contact of two perceptions produces an idea ; the contact of a perception with an idea produces a deductive idea ; the contact of two or more ideas with each other gives rise to both induction and deduction, and ideas of an abstract order.† It is estimated that of idiots not affected by epilepsy, who are brought under instruction in childhood, from one-third to one-fourth may be made capable of performing the ordinary duties of life with tolerable ability. There are a large number, who often apparently are the least amenable to instruction, who will attain to a considerable degree of intelligence under judicious instruction, and will develop sufficient ability to be capable, under the direction of others, of acquiring a livelihood. There is generally a disposition on the part of teachers and nurses, to force the intellectual capacities of the feeble-minded, instead of trusting to their progressive development, after the physical powers have been seduously cultivated. Consequently it follows that the weak organ suffers first, and headaches, sickness, foul tongue, indigestion, and debility, succeed each other, and induce great stupidity and mental inertia. To conclude, in the words of Dr. Kerlin,* it follows :

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* Manual of Psychological Medicine. London. 1874.

* On Idiocy and Imbecility. By Wm. M. Ireland, M.D. London, 1877, page 40.

† See a report of his paper on some of the Causes of Idiocy and Imbecilty in the *British Medical Journal*, Oct. 11, 1873.)

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* Mental Hygiene. Boston. 1863.

† Intermarriage of Relations. Nathan Allen, M. D. 1869.

‡ On the Causes of Idiocy. Edinburgh. 1858.

a. That idiots and imbeciles should be treated distinctively from all other classes.

b. That they cannot with advantage be placed in ordinary schools with other children.

c. That they ought not to be associated with the insane in asylums.

d. That they should not be incarcerated in penal institutions.

e. That they should not be congregated with the pauper inmates of almshouses.

f. That in the great majority of instances they are better and more successfully treated in well-organized institutions than is possible at their homes.

Papers on this interesting subject, and on the results of the inter-marriage of the consanguine, will be particularly welcome, and will be published with pleasure.—Ed.

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* On the Feeble-Minded, Imbecile and Idiotic, by P. Martin Duncan and William Millard. London, 1866, page 142.

† On Idiocy. New York. 1866. Page 95.

* The Organization of Establishments for the Idiotic and Imbecile Classes.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ARCTIC HYGIENE. By T. J. TURNER, M.D., Etc., Medical Director U. S. Navy. Washington, D. C.

It is not with the expectation that there will be presented to the reader much of anything very new in the matter of Arctic Hygiene that the writer formulates from his naval sanitary gleanings the following items and the suggestions arising therefrom:

THE SHIP.—The choice of a vessel for Arctic voyaging may not come directly within the grasp of the sanitarian, but for safety, comfort and health of the officers and crew, the inhabitants of the structure, such vessel should be of wood, with sails, and fitted with auxiliary screw power. Built of wood, as less liable to be crushed, stove in, or otherwise destroyed by encounter with gales and ice, and not of iron, on account of the risk of its fracture from exposure to low temperatures, its power of conducting heat and thus cooling the interior of the hull, as well as the difficulty of repairing such structures when injured under Arctic surroundings; with auxiliary steam power as furnishing the mode of propelling the vessel in emergency, and also as the means for heating and ventilation; with an inner ceiling of felt and cork, these being good non-conductors, preventing the diminution of temperature in-board, from the cooling of the hull, and also arresting the condensation of moisture, rendering the vessel less humid, diminishing, also, the exposure of the crew to two prominent causes—cold and damp—of the "dread scourge of the Arctic Zone," scurvy.

It is to be considered that such a vessel requires coal space, and that for long continued service enough coal could not be carried. It is suggested, therefore, that compressed coal—in "bricks"—should be used, so as to make available every fraction of coal-bunker capacity; or, in the future, if petroleum is to be made of service as a fuel, some apparatus for its combustion under the boilers, should be devised. The screw should be well protected from injury, made to hoist, and spare blades carried, so made as to be screwed and fastened in the hub in the event of accident to the blades in use.

A condensing apparatus for furnishing a supply of fresh water, and small portable stoves in which petroleum can be used as fuel, to be used in the event of the abandonment of the vessel, should be part of the outfit. Steam heaters should be placed in all the occupied quarters. Their use would call for great vigilance on the part of the engineer officer, but their sanitary value over the inhalation of lamp smoke, ashes, etc., is unquestionable.

Sleeping bunks in the rooms of officers should be removed, and a canvas cot, such as in use in the U. S. Navy, dut substituted. An officer of the Hall expedition informed me that during the cruise, after his recovery from an attack of rheumatism which confined him to his bunk for a time, he found on examination a mass of ice under the bed upon which he had been sleeping, the result of the freezing of the condensed moisture of the exhalations from body and lungs. He had been sleeping in a wooden trough upon a layer of ice.

Parry, in his second voyage (Hecla and Fury, 1821–22–23), speaks of sleeping in hammocks in this manner, "by which ventilation is materially improved." The canvas hammock permitting a certain degree of free movement of air.

Regarding the ventilation of Arctic

cruisers, without entering here upon any demonstration as to the necessity of fresh air, under these circumstances it will suffice simply to record the observations of explorers upon the subject.

The Hecla, in Parry's third voyage (1824–25), was fitted with Sylvester's warming apparatus, and Parry states: "it need scarcely be added how conducive to wholesome ventilation and to the prevention of moisture below, such an arrangement proved; suffice it to say, that we have never before been so free from moisture, and that I can but chiefly attribute to this apparatus the unprecedented good state of health we enjoyed during the winter."

Hayes states that "our quarters are throughout well ventilated and free from damp." Scurvy never appeared in his crew.

There is but little stated in any record of Arctic cruising of latrines on shipboard. It is suggested that an earth closet be used in high latitudes, using the ashes from the gallery and furnaces in the place of earth. Such apparatus would appear essential in cases of sickness, and it becomes a sanitary necessity to prevent the exposure of the body to those extreme temperatures when obeying the calls of nature.

THE CREW.—The men employed in Arctic voyaging should be between 24 and 33 years of age. The average full growth has been obtained by the 24th year, and the years between that and the age of 33 may be considered as within the limits of the time when men are capable of the maximum amount of physical endurance. Men for this service should be of mean height and weight for their ages, and those with comparative greater length of trunk to full height chosen as having more staying power, capable of much greater endurance than others, as has been observed by Ruschenberger in men with long bodies and short legs; "duck-legged" men, to use a sailor's phrase. There are ample physiological grounds for the choice of men so characterized. If practical, men who have been inured by habit to exposure in such latitudes, and with more or less experience in the emergencies for which Polar cruising is so famous, should be chosen. Of course none but the physically robust and those in sound health should be selected. There is a physiological condition, better known than described, which has been termed vital resistance, the sum of the vigorous intensity of all the structures and functions of the body—a power to resist the depressing causes of disease—which is readily recognized by expert observers, and which should always be considered in the selection of a crew.

The prominent points, however, presented to the sanitarian in the consideration of Arctic Hygiene, are clothing and food. These factors, in a physiological equation, derive their importance from the single fact of the low temperature under which the Arctic explorer lives.

The voyager, with a normal physiological temperature of from 37°–37 5° Cent., represents a body exposed to the temperature of an "Arctic climate," where the thermometer registers an annual temperature of 0° Cent., and but for certain physical conditions, would be precisely affected by the modes by which all bodies are cooled; we know also that a heated body cools more or less rapidly according to the temperature of the medium in which it is placed, and that there is a tendency to the equalization of temperatures of the body and the surrounding medium when so situated. This tendency to the equalization of the temperature of the body (37° 37.5° C.) to that of the temperature of the surrounding media in an Arctic climate is sought to be arrested, and the body temperature maintained at its normal, through the instrumentality of clothing.

The other factor in this question is the constant maintenance of this normal temperature of the body, and is sought to be obtained by the calorifacient elements furnished by food. On the one hand, there is a constant, *i. e.*, a low temperature, on the other the use of clothing to arrest the diminution of heat below the standard of health, and food to maintain the body temperature at its normal.

Nature has solved this problem for the inhabitants of the Arctic littoral zone, by teaching them to clothe themselves with good non-conducting materials to limit this physical diminution of heat, and has furnished them such articles of diet, known in chemical physiology as the heat-producing foods, wherewith the body temperature is maintained. *The nearer the Arctic adventurer approaches the dress and diet of his Polar associates, the less he has to fear from the appearance of scurvy, and the more readily is his health sustained under such extreme climatic surroundings.*

CLOTHING.—For service in the Arctic regions it is essential that the under-clothing, that immediately next the skin, be made of flannel. A double suit of shirt, drawers and socks worn at the same time, is a much more efficient means of retaining body-heat than a single suit of the thickness of the two suits. The outer clothing should be made after Esquimaux fashion plates, and of same varieties of material —seal skin, the skins of bears, reindeers, wolves, foxes, hares, marmots and birds. Lyon states that seal skins are seldom employed for any part of the dress except boots and shoes, as being more capable of resisting water, and of far greater durability than other leather. Kane recommends seal skin mittens. The fur head-dress should cover the neck and ears; the boots, shoes and gloves should be made as stated after Esquimaux fashion. The use of a nose-cover has been objected to, but Kane recommended a fox-tail held between the teeth and covering the nose whilst exposed when traveling. A fur mask for the face will be considered under the remarks upon snow-blindness. Hayes says of the Esquimaux living at Renssalaer Harbor, lat. 78° 37′ N.: "Their clothing (whilst out hunting for tood, bear and walrus) at this period consists of a bird-skin shirt, bear-skin pantaloons, boots and mittens, dog or bird-skin stockings and a fox-skin coat, with an attached hood covering the head. Upon entering the huts, where the temperature ranges from zero to the freezing point, the coat is always taken off; the outside temperature ranging from 30° to 70° F. below zero."

The sleeping dress in Parry's Polar voyage (1827) was made of camlet lined with racoon-skins, and the traveling dress was made of strong box-cloth. The sanitary ruling appears to be to dress in the same materials as the inhabitants of the Arctic circle, supplementing such clothing by other fabrics as scientific observation has added to experience.

Much the same ruling will apply to the item of food and its preparation.

FOOD.—It is not proposed at this time to enter upon the consideration of the nutritive values of the various prepared foods that have been suggested for the prolonged rationing of the Arctic cruiser, nor to dilate upon the recondite physiology of calorification. What is to be considered as regards Arctic Hygiene relates especially to the quantity and quality of the food. As to quantity, according to Dalton, the amount necessary for a man in full health and exercising in the open air, per diem, equals about 2.41 lbs. av. of solid food, and 3.38 lbs. of liquid food, a total of 5.79 lbs. equal to about $\frac{1}{24}$ to $\frac{1}{25}$ of the weight of the body. The average weight of the daily ration in the navy at sea is 40.21 oz., liquid food being excluded. These amounts must be considered as the minimum quantity consistent with the maintenance of health within the temperate zone. Sir John Ross states that an Esquimaux eats perhaps 20 lbs. of flesh and oil daily. Parry's test on an Esquimaux's appetite for one meal was 8½ lbs. of flesh, 1¾ lbs. of bread and bread dust, water not counted, and the quantity was not considered extraordinary. In another instance he gave to a young Esquimaux 10¼ lbs. of solids, 1 gallon and one pint of water, 1¼ pints of soup, 3½ glasses of raw spirits, and a tumblerful of strong grog, and in yet another instance the subject ate of solids—

	lbs.	oz.
Bread dust and train oil, . .	1	10
Walrus flesh, boiled, . .	7	1
Seal and bread.	1	0
Two candles, . . .		3
Bread and and butter, . .		1
Total, . .	lbs. 9	15 oz.
Of fluids—		
Rich walrus soup, . . .	2 quarts.	
Water, ...	4 quarts.	
Total, . .	6 quarts.	

Simpson, in his narrative of a journey around the world (1847), stated that a Yakut in an hour ate 9 lbs. of beef and 4½ lbs. of butter. Hayes says: "I have frequently seen an Esquimaux hunter, when preparing for the hunt, eat from six to twelve pounds of meat, about one-third of which was fat, and I should place the daily consumption of the men at from 12 to 15 lbs." The food was mostly taken raw, or, as his men expressed it, "cooked with frost." Kane says: "I should average the Esquimaux ration, in a season of plenty, at 8 or 10 pounds a day, with soup and water to the extent of half a gallon." Parry had previously arrived at very much the same estimate.

These quantities certainly must represent the extremes. No attempt can be made to determine the mean quantity with any degree of exactness, but it is evident that an approximation can be made, and it is suggested that the weight of the food per diem for the Artic explorer can be based upon from 1-20 to 1-15 of his body weight.

Of the quality of the food: On account of the low temperature of the surrounding air, more heat is required to be produced in the body, and efficient combustible material is in consequence needed to support its ordinary temperatures. This is pre-eminently found in the fats. It must also be remembered that nitrogenous matters are required in food, not only for the formation of tissues, but likewise for contributing by promotion of the requisite changes to the utilization of the non-nitrogenous principles and unless it exists in suitable amount in the food, these principle fail to pass to their proper destination.

It is known, also, that the carbohydrates contribute to the formation and accumulation of fat, but for this to take place the concurrence of a due amount of nitrogenous matter is required. It is upon these principles that the quality of the Arctic ration must be based. The daily allowance in character and quantity, as noted by Parry on his Polar voyage (1827), was for each man per day: "Biscuit, 10 oz., Pemmican, 9 oz., sweetened cocoa powder, 1 oz., to make one pint of cocoa, rum, 1 gill, with 3 oz., of tobacco per week."

Dr. Vreeland (1850) thus details the character and quantity of food, with other incidental remarks bearing upon Arctic hygiene, in his record of the cruise of the "Rescue and Advance":

"The daily ration for each man for four days in the week consists of one pound of fresh beef or mutton, and three-fourths of a pound of preserved vegetables—either potatoes, carrots or beets. On the alternate three days, one pound of salt pork or beef was issued, and in addition all the other articles of the navy ration. A liberal supply of vinegar, pickles and preserved cranberries was allowed, and an abundance of well fermented bread was made daily. The fresh provisions had been previously cooked and preserved in the canisters, hermetically sealed, and at first was quite palatable, but in a short time they became insipid and tasteless, and towards the close of the winter such was the disrelish and disgust for them that not one-half of the ration was eaten (I have observed and already noticed this fact regarding canned meats). A little variety in the way of bears' and foxes' flesh was now and then obtained and *enjoyed exceedingly*. They were considered luxuries and mostly appropriated to the scorbutic, upon whom they seemed to have an excellent effect.

"From two to four ounces of lime juice made into lemonade and taken daily in the presence of the medical officer by each man. . . .

"Exercise and social entertainment. . . . Towards the end of the long nights, a loss of strength and flesh was observed, the crew had become bleached to a pale waxy color, and the hair came out abundantly.

"Antiscorbutics in a measure lost their effect, only holding the disease in check, for the symptoms did not begin to disappear or cases recover permanently until after the rising of the sun."

The natives of South Greenland prepare themselves for a long journey in the cold by a course of frozen seal. At Upernavik they do the same with the narwhal, which is thought to be more heat-making than the seal, while the bear, to use their own expression, is "stronger travel than all," says Hayes.

"Our diet (Franklin and Richardson's Journey, 1819-22) consisted mostly of reindeer meat, varied twice a week by fish and occasionally by a little flour, but we had no vegetables of any description. On Sunday evenings we drank a cup of chocolate, but our greatest luxury was tea (without sugar) of which we regularly partook twice a day."

"Raw beef with acids and condiments," says Kane, "makes a salad which an educated palate cannot help relishing; and as a powerful and condensed heat-making and anti-scorbutic food it has no rival."

Sir John Ross (Narrative of a Second Voyage in search of a Northwest Passage, 1835) says: "He who is well fed resists cold better than the man who is stinted, while starvation from cold follows but too soon a starvation in food. . . . In every expedition or voyage to a polar region the quantity of food should be increased, be that as inconvenient as it may. It would be desirable that men could acquire the taste of Greenland food, while all experience has shown that the large use of oil and fat meats is the true secret of life in these frozen regions."

Sir John Franklin, in his narrative of a journey to the shores of the Polar Sea (1819-22), speaking of food and clothing as supplementing each other, says: "During the whole of our march we experienced that no quantity of clothing could keep us warm while we fasted; but on those occasions on which we were enabled to go to bed with full stomachs we passed the night in a warm and comfortable manner."

It must not be supposed that the abundant supply of animal food necessary is found in the Arctic regions. The records of all polar expeditions are those of privation. Even the Esquimaux—and I group for sanitary purposes under that term all the inhabitants within the Arctic circle—eke out a precarious existence; their struggle for life is a fight for food and clothing. Their days are spent in the hunt and capture, for food and raiment, of the seal, walrus, whale norwhal, porpoise, wolves, foxes, deer, bear, birds, etc. It is on this account that all expeditions fitted out for the Arctic exploration, have, in addition to either the army or navy ration of the country to which they belong, supplemented such daily allowance with preserved foods of various kinds,

For expeditions fitting out from the United States, the naval ration which has the following composition and daily distribution is taken as the basis:

U. S. NAVY RATION.	Biscuit.	Beef.	Pork.	Preserved Meat.	Flour.	Rice.	Dried Fruit.	Pickles.	Sugar.	Either— Tea.	Either— Coffee or Cocoa.	Butter.	Can'd Tomatoes.	Beans.	Molasses.	Vinegar.
	OZ.	POUNDS.					OUNCES.							FRACTION OF PINT.		
Sunday	14	...	....	¾	....	½	....	....	4	½	2	2	6	....	....	....
Monday	14	....	1	....	....	....	....	....	4	½	2	....	....	½	....	...
Tuesday	14	1	....	...	½	....	2	....	4	½	2	....	....	....	....	....
Wednesday	14	....	1	....	....	...	....	4	4	½	2	....	....	½	....	....
Thursday	14	....	....	¾	....	....	....	....	4	½	2	2	6	....	½	....
Friday	14	1	....	....	½	....	2	....	4	½	2	....	...	....	....	....
Saturday	14	....	1	....	....	....	....	4	4	½	2	...	....	½	...	½
Weekly quantity	98	2	3	1½	1	½	4	8	28	3½	14	4	12	1½	½	½

Of these supplemental preserved articles of diet, which should have, according to Parkes, the following essentials, "nutritious, portable, easily cooked and not liable to deterioration," it is proposed to consider a few which, (having certain alimentary values and as adding variety to what would otherwise be a monotonous diet, and so pre-dispose to scurvy,) are therefore important additions to the Arctic food supply.

Lemon or lime juice.—It is not designed to enter into the historical account of the association of lime juice with prolonged voyages, or as an anti-scorbutic, for if the constant iteration of its value for over two centuries has failed to impress its necessity upon the Arctic explorer, it is not now the time to commence to insist upon its value.

The British merchant shipping act orders that, after the vessel has been ten days at sea, one (1) oz. of lemon or lime juice, mixed with one (1) oz. of sugar and one-half pint of water be served out to the crew, between the hours of 12 and 1 daily.

In the Royal Navy ½ oz. of lime juice and 1 oz. of sugar are to be served out after 14 days at sea.

It would be well that this serving out be made under the cognizance of the medical officer, so that it is seen that every man has really taken the allowance provided.

As to the *role* of *alcohol*—distilled spirituous liquor—it is only to be used as a medinical agent, and should not enter upon the list of daily foods. This question from a sanitary standpoint I consider settled. As to the use of beer and ale, they have been found of value, and materials for making a beer from spruce tops have been proved to be of benefit. I have in this connection to suggest that cider should be carried, as furnishing another acid (malic) to the acids already in use as anti-scorbutics. Concerning tea and coffee and chocolate, all are useful, yet I endorse the remark of Fonssagrives, "On peut dire que le thé est la veritable boisson Arctique."

Of the preserved meats—pemmican stands first in order, and has become a necessity. That prepared with sugar, raisins and currants appears to be preferable to that made without such additions.

Rochefort says, "A pound of pemmican per day, per man, is equivalent to three pounds of beef in nutritive value."

Weyprecht found the pea sausage of great value. Dried meat, Liebig's extract of meat and desiccated soups have proved of benefit to small traveling parties.

I have to suggest the use of sardines and caviare as parts of the Arctic food outfit. In 1807, Plowdens preserved meat in rich gravy. Granholm, in 1817, used hot fat; and Wothley kept meat fresh by preservation in oil.

I am of opinion that the method of Granholm and Wothley are worthy of a more extended trial, and that lard and lard-oil should be used as furnishing animal fats. The meat could be placed in barrels or in tight tin cans; in fact, packed after the manner of sardines.

It may not be out of place to call attention to M. Bandet's method by which meat is kept in water acidulated with carbolic acid, 1 to 5 parts per 1,000 of water. A series of experiments prove that all kinds of meats could thus be kept for lengthened periods without acquiring any ill taste or odor. The meat may be placed in barrels or in air-tight tin cans filled with acidulated water of the above strength.

The Belgian Musée de l'Industrie noted this method as "most deserving of attention." It might be of service in preserving the meats of animals killed in the Arctic circle, but there, as is well known, cold is a great preservative.

In the case of necessity it is suggested that the brine from the salt meat be dialyzed. Place the filtered brine in a bladder or a vessel of prepared dialysis parchment (a chamois or buckskin has been used) and place it in a large vessel with water; the salt diffuses out, leaving the meat extract behind; from two gallons of brine was obtained a fluid which yielded, on evaporation, one pound of meat extract. This, mixed with flour, forms a meat biscuit. Salt water may be used at first. The stomach or bladder of some animal could be utilized in the absence of parchment paper. An abundant supply of cheese and condensed milk should not be omitted from the supply of foods.

As to the use of fresh animal diet for the prevention of scurvy, Hayes says: "The same laws govern the Esquimaux and the white man, and just in proportion as we of the Advance accustomed ourselves to the diet of the Esquimaux did we gain power to expose ourselves with impunity to low temperatures," and further says: "My experience with Dr. Kane has led me to believe that the scurvy, hitherto so fatal to Arctic travelers, may readily be avoided by the liberal use of fresh animal diet;" and Kane, when in great anxiety with a scorbutic crew, wrote: "Had we plenty of frozen walrus I would laugh at scurvy," and that the operation of freezing destroys entirely the repulsiveness of raw flesh."

Prepared meats should be of recent date as to their preparation. Elsewhere I have stated that the slow chemistry of hermetically sealed aliments needs investigation. Fonssagrives says that "Nutrition always suffers, whatever may be its alimentary resources in other respects, if its elements are long removed from the influence of life."

From the above statement it will be observed that in all Arctic explorations:

1st. That there is an absolute necessity for an ample supply of animal food.

2d. That this food should mainly be of fat.

3d. That such food is more valuable as a food when recent; and

4th. That the Arctic explorer should accustom himself to live upon Arctic animals.

5th. That a full meal should be taken at the end of a journey—after work.

6th. That fresh raw animal food is the best antiscorbutic.

Of vegetable foods. — Fresh bread should be used whenever it can be conveniently prepared. This necessitates the carriage of flour in bulk, but the value of fresh bread over the ordinary sea biscuit is undoubted.

Dried potatoes, onions, carrots, beets, parsnips, have all been proved useful. Much depends on their cooking to render them palatable.

The writer has noticed a method which is employed by the whalers in the North Pacific Ocean for preserving potatoes on long voyages. The potatoes are to be cleaned, pared, cut into small cubes, placed in a hogshead, and then covered completely with a dense black sugar-house molasses. When taken out, washed and cut, each mass will be found to have become discolored externally to the depth of a line or two, but the taste and texture of the tuber remain.

Sour crout furnishes lactic acid, tomatoes and cranberries give malic and tartaric acids, vinegar and pickles acetic acid, and lemon-juice citric acid.

I have already suggested cider as furnishing malic acid, and suggest the use of apple butter, made by boiling apples to the proper consistency with cider, as furnishing a desirable addition to the food supply. Latterly, in considering this matter, I am disposed to suggest also the addition of malt extract, and, considering the amount of oil contained in them, peanuts as a relish. As to the use of fresh vegetables, whenever scurvy grass and sorrel can be found they should be used.

Dr. Joseph Wilson, U. S. Navy, says: "The idea of some sort of a small garden for fresh vegetables on shipboard has not altogether been neglected. Thus we read of a tank of water being kept on deck for the cultivation of cresses. We should suggest something much more productive of fresh vegetables without so much interference with the deck of the ship. There are many small seeds, beans, peas, lettuce, mustard, parsley, horse-radish, turnip, celery, etc., which may be kept on board for a long time, and by means of a suitable apparatus they may readily be made to grow till they develop two or three leaves to each seed. They are thus capable of furnishing, in abundance, the fresh material for a nice salad, under circumstances which would otherwise render this quite impossible. I have used an apparatus consisting of a series of earthen vessels perforated like a colander, except the lower one, and provided with a loose lid. Each of these vessels, except the lower one, is supplied with a layer of seeds, previously washed and soaked, the whole is adjusted in position (one vessel fitting partially to the rim of the other) and a cupful of water poured into the upper part, whence, gradually percolating, it moistens the seeds in the whole series, any superfluity of water collecting in the lower jar. Every two or three days the water is poured from the bottom into the top of the series, and in the course of a week or more, varying with the temperature, condition of the seed, etc., the whole apparatus is found to be packed with tender sprouts."

Lyon (1821), in the Hecla, succeeded in raising quite a number of vegetables, cresses, mustard, peas and radishes. In four months 178 lbs. were grown, and around his own stove in the cabin fourteen lbs. of fresh vegetables. He speaks of the effects of the absence of light upon vegetables grown in this manner as being of a light yellow color, with few leaves.

Scurvy.—This scourge of the seas should no longer exist. It is not the purpose here to enter into its history or pathology ; all that is required for for the sanitarium is a knowledge of its causation, and prevention follows then as a matter of course.

This nutritive cachexia, as De Mericourt calls it, has as its causes, cold and damp, over-crowding, the prolonged absence of light, depressing emotions, fatigue, impure air, harsh discipline added to insufficient food or a badly composed diet. Sir Alex. Armstrong states as his opinion, founded upon his observations in the Investigator (1851), "that cold and moisture aid very materially in the production of this disease, in proportion to the intensity of these agents, and consequently to the rapidity with which they favor the abstraction of animal heat. This is more particularly the case when the quantity of food is insufficient to supply material for the production of that caloric which cold and moisture have abstracted."

Dr. Hayes says, regarding scurvy, that whenever it has occurred in vessels visiting the Arctic seas it has been mainly owing to accidental causes, which experience has taught us to avoid. "These are: salt food, cold, the darkness of the long winter night, with the depressing moral and physical influence which it carries in its train, and as an occasional exasperating cause, excessive exertion."

Says Mr. Harry Leach (1867,) "Diet, bad provisions, and any form of disease to which sailors, in common with other men, are subject, will predispose to scurvy."

The report of the committee to the Lord Commissioners of the Admiralty on the cause of the outbreak of scurvy on the Alert and Discovery (1877) attributes the early outbreak of scurvy in the spring sledging parties to the absence of lime-juice from the sledge dietaries. The report goes on to state as follows :

" We are further of opinion that the long winter, extending over 142 days, involving, during that period, absence of sunlight, confinement during the greater part of the 24 hours to a lower deck, of necessity not free from damp, and an atmosphere comparatively vitiated, accompanied by exposure to extreme changes of temperature and deprivation of fresh meat, had not been without effect on the health of the officers and men, notwithstanding the apparent good condition in which they started on their sledging journeys. These predisposing causes ot scurvy were aggravated by the severe cold and arduous labor encountered by the sledging parties immediately on leaving their ships, followed by the usual results, inability for some days, on the part of those concerned, to take their proper allowance of food and to obtain sufficient sleep."

This committee also stated that the evidence was almost unanimous that the want of fresh vegetable food, or some of the constituents which compose fresh vegetable, and probably fresh animal food, is the cause of scurvy. The other conditions are previous illness, deprivation of sun-light, cold, impure and damp atmosphere, want of sufficient exercise, a diet deficient in fresh meat, and fatigue.

Whilst the above statement is true concerning the Arctic explorer, it does not hold entirely good as to the Esquimaux, who are essentially meat eaters, the Arctic flora not furnishing such a quantity of edible vegetables as appears necessary to a physiological diet, or one protective against scurvy. Perhaps there are ethnic differences in this respect.

As to the prevention of scurvy—Kane says, "the scurvy exacts a comfortable temperature and a drying one." Armstrong states, " where scurvy prevails on board ships, the decks should be kept dry, and the air warm and comfortable. A cold moist atmosphere between decks is at all times pernicious to the health of a ship's company." Avoid over-crowding, allow no diminution of air space, keep the crew in the open air in as much of sunlight as is possible, cultivate cheerfulness, avoid over-work, and at the same time laziness. A discipline firm, yet mild. As a common danger threatens all, so a community of good feeling, based on respect for the judgment, justice and consideration of the commander, should reign. The regimen grouped under the term anti-scorbutic has already been shadowed in the consideration of food.

Snow-blindness.—For the prevention of snow-blindness Kerauden recommended a fur mask fitted with blue glasses. Glasses of a neutral tint would be preferable, but it is doubtful if glasses should be used at all, owing to the liability to fracture. Metallic frames, covered with chamois skin, fitted with colored glasses, have also been recommended, but have, in addition to the accident of fracture, another objection, found in the rapid conducting power of the metal frame, even when covered. The "snow eyes " of the Esquimaux are made of light wood, with a bridge resting on the nose, like spectacles, and a narrow slit for the passage of light. A gutta percha mask, made after the same fashion, has also been suggested, but the Esquimaux apparatus is to be preferred. It can readily be adapted to a fur mask covering the face.

GENERAL CONSIDERATIONS.

Personal cleanliness is, of course, to be observed. The wearing of a long beard has been objected to, as it soon becomes coated with ice from the pulmonary exhalations. Both beard and moustache should be worn short. The hair of the head should be worn long. Parry, in his second voyage (1821–23), found excellent results in preserving the health of his crew, by "attention to cleanliness, superior warmth, drying of clothes and airing of bedding." I would recommend the use of petroleum, as fuel, in expedition parties. With the treatment of diseases and accidents incident to Polar exploration, the writer has nothing to do. The desire has been to present the best means of preserving the health of men under Arctic environment, and so prevent the occurrence of disease. With cleanliness, dryness, ventilation, food and clothing, the story is told.

In conclusion, the writer has no

apology to offer for what is rather an extended series of references; they are deemed essential, and he has not gone into such detail save for the purpose of setting forth some suggestions regarding Arctic sanitation. Starvation, freezing and scurvy are the foes to be dreaded, and if this collection of sanitary weapons will serve to shield the Arctic voyager, their gathering together will be ample reward.—*Sanitarian.*

VACCINATION. By AUSTIN FLINT, M.D., New York.

SIMPLICITY is a characteristic of some of the grandest of discoveries, and of the most important utilizations of natural laws in behalf of the interests of human life. How simple seems the recognition of the law of gravitation and the extension of this law to the planetary system! The applications of the expansive force of steam in mechanics appear to-day as simple as those of water-power. At the present time, telegraphy is not more wonderful than were the phenomena of electro-galvanism half a century ago. This train of reflection arises in thinking of the discovery of vaccination. If saving human lives be a criterion of the beneficent fruits of a discovery, there is none in the history of mankind which will bear any comparison with that of vaccination. Prior to the promulgation of this discovery in 1798 small-pox was correctly called one of the greatest scourges of mankind. A late writer cites the following statistics in illustration of the fatality caused by this disease: In England, in the seventeenth and eighteenth centuries, seven to nine per cent. of all deaths were attributable to small-pox. In Berlin, from 1783 to 1797, one-twelfth of the total mortality was due to the same. Junker computes the deaths occurring from small pox in the year 1796, among the seven million inhabitants of Prussia, at twenty-six thousand six hundred and forty-six. In the eighteenth century, thirty thousand died annually of small-pox in France." It was a provorb at that time: "From small-pox and love but few remain free."

A vast diminution of the mortality from small-pox resulted from the discovery of vaccination. Sir James Simpson, writing in 1849, states that "during the latter half of the last century, thirty thousand individuals were computed to die annually of small-pox in England." Dr. Gregory estimated the number at about forty-five thousand. Dr. Haygarth calculated the proportion of deaths from this disease to amount annually to thirty-eight thousand in eight millions of inhabitants. In contrast with these statistics, according to Simpson, "From the official returns of the Registrar-General, it appears that at the present time (1849) the number that perish annually of this same disease is reduced to less than ten thousand." Quoting further from this author: "In England alone, therefore, the absolute mortality from small-pox is less by twenty thousand a year than it was half a century ago. If a similar rate of reduction in the number of deaths from small-pox holds good—as we have every reason to believe is the case—in the other kingdoms of Europe, then, out of the two hundred and twenty millions of people that inhabit this quarter of the globe, four hundred thousand or five hundred thousand fewer die now of small-pox than, with a similar population, would have died from this malady fifty years ago." The author adds that, according to this rate of computation, "there are preserved in Europe during a single half-century a number of lives greater in amount than the whole existing population of Great Britain." "During the long European wars connected with and following the French revolution, it has been calculated that five or six million of human lives were lost. In Europe vaccination has already (1849) preserved from death a greater number of human beings than were sacrificed during these wars." It is not necessary further to adduce facts to substantiate the statement that, of all past discoveries, vaccination is beyond the reach of comparison when its effects upon the mortality from one of the most loathsome of diseases to considered; nor is it neccessary, in connection with the beneficent effects of this discovery, to refer to an exemption from the permanent imprint of the disease on those whom it does not kill.

Looking back upon the discovery of vaccination, it has the appearance of a very simple affair. Edward Jenner, apprenticed to a surgeon in Gloucestershire, heard a young country woman remark to his master that she could not take the small-pox, for she had had the cow-pox. He was then a youth. At the age of twenty-one he went to London. and for two years he was the pupil of John Hunter, and a member of his household. Under the superintendence of that great man Jenner became, in the language of one his biographers, "an expert anatomist, a sound pathologist, a careful experimenter, and a good naturalist." Returning to his native town as a surgical practitioner, the casual remark of the country-woman years before led him to inquire into the grounds for her statement. The expectation of scientific results, doubtless, often precedes their development. It appears to have been so in this instance, for he mentioned, in a letter to Hunter, his supposition that cow-pox communicated to man by inoculation, might be preventive of small-pox, and got, in reply, those pithy words: "Don't think, but try." Jenner tried. Mark how simple the procedure in what has been called "a masterpiece of medical induction." He had but to ascertain that, in a certain number of instances, they who had contracted—by milking—a local affection from the udder of the cow, were insusceptible to the contagious miasm of small-pox; that the particular affection in the cow which gave this protection was indicated by a characteristic vesicle; that by inoculation with the liquid contents of this vesicle the affection was produced in man; and, finally, that they to whom cow-pox had been thus communicated were rendered thereby incapable of having small-pox by inoculation with the virus of that disease.

How natural and easy does it now seem to have ascertained these points! Yet it took Jenner twenty years to accumulate data sufficient for him to venture upon the publication of his discovery! Jenner's modesty is shown by the title of his publication, namely: "An Inquiry into the Causes and Effects of the Variolæ Vaccinæ: a Disease Discovered in some of the Western Counties of England, particularly Gloucestershire, and known by the Name of Cow-pox." It is noteworthy that this publication, embracing the facts on which his discovery was based, consisted of only about ten thousand words.

Vaccination for a time encountered intense prejudice and virulent opposition. Jenner, who went to London after the publication of his discovery, was unable for three months to find any person on whom he could exhibit to his medical brethren the vaccine disease. Some eminent physicians protested against it. The reigning king, George the Third, was supplicated to suppress the practice after it had made some headway. An anti-vaccination society was formed, and an appeal made to the public to second "efforts in supporting the cause of humanity against cow-pox injuries." Alleged deaths from cow-pox were published in the mortality bills of London. Society was warned against the danger of introducing "beastly diseases," which were likely to be transmitted to posterity for ages. It was asserted that the mental character would be imbruted, and instances were related of persons, after vaccination, "coughing like cows" and "bellowing like bulls." Theological objections were raised. It was argued that "small-pox is a visitation from God, but the cow-pox is produced by presumptuous, impious men; the former Heaven ordained, but the latter is a daring and profane violation of our holy religion." The practice was stigmatized as "a gross violation of religion, morality, law, and humanity." Instances occurred in which persons who had submitted to vaccination were mobbed. Its introduction into this country was attended with similar difficulties. The writer of this article believes that his father, Dr. Joseph Henshaw Flint, then a medical student, was the first person vaccinated on this side of the Atlantic; and, to avoid trouble, the vaccination was performed with great secrecy by Dr. Waterhouse, who procured the virus from Jenner.

This early prejudice and opposition did not long continue, but strange to say, within late years, some of the objections which had become obsolete have been revived. Conceited ignoramuses have called in question the beneficence of vaccination; and efforts have been made to excite not only distrust of its efficacy as a measure of protection against small-pox, but a feeling of hostility towards it. Compulsory vaccination has been resisted as an invasion of natural rights. A spirit of antagonism is not confined wholly to the ignorant. For the most part, however, they who, as it would seem, should know better, belong to the credulous class who believe that views conflicting with those held by the medical faculty express new truths which the latter, from professional bias or jealousy, refuse to acknowledge. If I mistake not, modern opponents of vaccination who give any thought to the subject are chiefly among those who suppose that the minds of medical men are held in a kind of bondage to traditional doctrines and authoritative opinions, which constitute an insurmountable barrier against a liberal and untrammeled exercise of judgment. There are persons, and their number is not small, who are ready to adopt, without either opportunity or desire for investigation, heterodox principles in medicine for the reason that they are so, assuming that they who make it the business of their lives to endeavor to ascertain the truth in this department of knowledge are the least likely to find it. It would be easy to show that this is not an exaggerated statement.

What has the experience of the eighty years which have elapsed since Jenner's discovery taught, respecting vaccination? This question may be answered fairly in a few words.

Jenner evidently thought that a single successful vaccination would prove as permanently and completely protective against small-pox as variolation or an inoculation with the virus of the latter disease. Experience has taught otherwise. Vaccination has not always proved completely preventive, and the protection which may be complete for a time eventually diminishes. It seems to have been established that the protective efficacy of cow-pox has decreased since the time of Jenner, and it is a logical inference that the decrease is due to its transmission from subject to subject for a series of years; in other words, the so-called long-humanized vaccine virus has deteriorated. These facts Jenner could not have foreseen. Had he been able to foresee, he would probably have been less sanguine than he was in the expectation that small-pox might be driven out of existence by vaccination. It is true that when vaccination fails as a preventive measure, it modifies small-pox so as to render it almost harmless as regard both danger to life and the visible marks of the disease. But these advantages are in a measure neutralized by the fact that the contagion from cases modified by vaccination, or, as it is called, varioloid, is as capable of producing the disease in a severe form as that derived from the severest cases of small-pox; and, moreover, the dissemination of the disease is sometimes promoted by mild cases of varioloid which are overlooked, or mistaken for another disease, namely, varicella.

Experience, however, teaches the way to overcome the difficulties just mentioned, in the first place by means of revaccination. The existence of a susceptibility to the contagion of small-pox is easily tested by revaccination, and, if the susceptibility exists, it is thereby for a certain period extinguished. The average length of time during which exemption from the disease is secured by a single vaccination is not yet determined, The period undoubtly varies in different persons within wide limits. In order to render security as complete as possible, the intervals between revaccination should not be to long. Too frequent revaccinations are not objectionable. It is a safe rule not to allow a longer interval than five years.

In the second place, there is reason to believe that the substitution of the so-called animal or bovine virus, for the long-humanized virus, will afford, for a time at least, security against deterioration. It is but lately that the importance of a renewal of the virus from the cow has been considered. That the bovine virus is more effective than the long-humanized virus is certain. It remains to be ascertained by the experience of future years whether its preventive efficacy is more persistent, and whether the transmission from animal to animal will, in the course of time, lead to its deterioration.

The use of the bovine virus has the recommendation of obviating the objection to vaccination on the ground of a liability to the communication of human diseases. The risk is small, but it is unequivocal. There is no foundation for the popular notion that there is danger from virus taken from subject with feeble constitutions, and still less for the idea entertained by some that mental qualities may be communicated; but it is certain that vaccination has been a means of contracting a specific disease other than cow-pox. It is a natural suspicion that diseases occurring coincidently with, or subsequent to, vaccinia, are attributed to the latter, but, as a rule, the connection is purely accidental. All occasions for apprehension on the score of acquiring human diseases is obviated if the virus be taken from the heifer; and this is a source of much relief to the physician, as well as to his patients. Unwarrantable suspicions of impurity in vaccine virus have often been the cause of injustice toward medical men. Our country owes a debt of gratitude to

Dr. Henry A. Martin for the importation, in 1870, of virus from a case of spontaneous cow-pox, discovered in Beaugency, France, in 1866, and perpetuated through successive inoculations in heifers, under the sanction of the French Academy of Medicine, and with the aid of the French Government. The virus from this stock has been distributed throughout our country, and is now generally used instead of the humanized virus.

Will small-pox ever be blotted out of the list of existing diseases? We can imagine the supreme happiness with which Jenner entertained this expectation. Contrast his feelings with the exultation of a world-conqueror! The fulfillment of Jenner's expectation is among the possibilities. It can be fulfilled only by extending to the whole human race the security to be afforded by vaccination and revaccinations. This cannot be done except by the diffusion of knowledge of the subject, and by Governmental power. Vaccination and revaccinations must be made everywhere compulsory. If they who resist their enforcement were alone the victims of the disease, society could afford to let them die "as the fool dieth." The question is whether society shall suffer on account of their folly. The right of society to protect itself in this matter is is clear as that of placing under restraint a homicidal maniac.

Meanwhile, cases of small-pox must be effectually isolated, and thorough measures of disinfection employed, under the direction of intelligent health-officers clothed with authority sufficient to enforce their regulations. The disease may in this way bc "stamped out" whenever and wherever it makes its appearance.

The practicability of stamping out small-pox was demonstrated a few years since in New York. In the winter and spring of 1877, the disease prevailed largely in that city. Efficient measures for vaccination, revaccination, the isolation of cases, and disinfection were pursued under the direction of the Health Board. The result was that from June, 1877, until April, 1879, not a single case occurred. During this period, a few cases escaped quarantine and were introduced into the city, but without communication of the disease to others. This result, and the brilliant achievement of stamping out epidemic cholera in 1866 and 1877, show what may be accomplished by sanitary science in the hands of those who, in addition to scientific qualifications, possess executive ability, together with adequate means and legal authority for carrying out efficiently preventive measures. The public will by and by come to an appreciation of how much of life and of property is to be saved by proper laws and organizations for the protection of public health. The glory of having triumphed over an invisible and deadly foe in the form of an epidemic disease is less conspicuous, but vastly more real, than that of the successful warrior. All honor to the past and present members of the New York Metropolitan Board of Health for their able and valuable services, which have been rendered without much approbation or encouragement from those for whom they have labored!—*N. Am. Rev.*

NOTE.—Though this article appeared in a secular magazine, and with the very best effect, it presents this subject so simply and clearly and comprehensively, that it is republished in these pages. The rebuke and ridicule of those foolish persons, professional and non-professional, who from ignorance, or fanaticism, desire to gain notoriety or profit by repudiating vaccination, and opposing its advocates, is so overwhelming, so completely met by facts, that every reader will welcome with pleasure what is here presented. The silly or designing or criminal members of the profession who have tried and are trying to gain notoriety and profit by ridiculing the advocates of vaccination, and causing a popular distrust of this precious boon should hang their contemptible heads after reading these overwhelming and incontestable facts.—E. S. G.

TREATMENT OF DIABETES MELLITUS.

PROFESSOR FLINT.

The treatment is emphatically dietetic. There have been a great many remedies proposed from time to time, recommended as having control over this disease. Now I am not prepared to say that there are no remedies which do exercise more or less control over it. But we should commit a grave error, and act very much at the expense of the prospects of our patients, if we gave any remedy which rendered them less careful in attending to the dietetic treatment. In other words, the dietetic treatment is to hold the first place. This treatment consists in withholding from the food almost entirely (for entirely we can not) sugar in any form, and all the starchy constituents of diet capable of being transformed into sugar. That is the principle. Well, if we merely state that to patients, and tell them they must not eat sugar, they must not eat starch, they will not be likely to carry it out. In the first place, it is not likely they will know enough of the subject to be able to carry it out, even if they were so disposed; and unless we go further, and are very careful as regards details, we shall find that the elimination of these constituents of the food will not be done; they will not tolerate it. If we are to succeed we should give appropriate attention to the preparation of the food, the number of the articles which the patient should be allowed to take, and the variation of the food from day to day, to make this anti-diabetic diet satisfactory to the patients; that is, satisfy their appetites and the purposes of nutrition. This can be done, and if it is done the patient carries out the treatment, because it is no hardship to carry it out; and the treatment is to be carried out not for a few days, or a few weeks, or a few months, but for an indefinite period—for years, and perhaps during the whole of life.

How is this second object to be affected? We must place before the patient a list of all articles of food which are to be avoided, specifying them; not contenting ourselves with the statement in general terms, but specifying on the one hand all the articles of food which he must not take, and on the other hand all the articles of food, animal and vegetable, and so on, which he may be allowed to take. He should have such a list before him, and such articles should be selected from the allowable ones as to make a variety from day to day, and so prepared by the artifices of cookery as to render them satisfactory. It can be done, but it requires patience and it requires care on the part of the patient or somebody else, and it requires some means. A very poor man, who has no one to look after these matters for him, and who has not sufficient means to obtain all the articles of food which are desirable, will find it very difficult to conquer this disease; and in certain public institutions—this hospital, for instance—it is very difficult to carry out the proper dietetic treatment. It requires so many things and so much attention to details that the dietetic treatment is very unsatisfactory in public hospitals.

The article of food which will cause most trouble is bread, and diabetics realize the force of the statement that bread is the staff of life. Frequently they say at first that they care little for bread, and can get along without it with no trouble; but they do not find it so after a while. They find that there is a craving for bread, and they feel that they cannot do without it. So there have been various substitutes for it. There is what is called the diabetic flour, which is bran very finely ground so as to divest it of all rough particles; but it has no nutritive quality whatever. It is really no better than sawdust, so far as nutritive value is concerned, and the patient adheres to it only a short time. For the past two years the patients that I have seen have been in the habit of using a bread which so far seems to be very satisfactory, but it is not entirely divested of starch. It is what is called guten bread, prepared by the Health Food Company, corner of Tenth Street and Fourth Avenue, of this city. Analysis shows that it is not entirely divested of starch, but it is so prepared that it is not deprived of the agreeable qualities of ordinary bread. Last winter I brought a loaf of that bread before the class and distributed it. I like it to eat myself, finding it by no means disagreeable; and patients take this bread and it meets their wants, thus removing a great obstacle to the successful dietetic treatment of this disease.

I do not deem it necessary to go over the entire list of these dietetic articles. You will find them by reference to different works. But the thing to do is to go into minute details with the patients. Explain to them fully just what is to be done.

Well now, after they enter upon this course of treatment in a very considerable proportion of cases the sugar diminishes at once, and sometimes it speedily disappears. Of course we should examine the urine from time to time to determine its condition as regards the presence of sugar and the amount of sugar. This treatment does not cause a disappearance of the sugar in all cases. I have a patient under observation now whom I saw for the first time about three weeks ago—a young, thin, intelligent man, who, I have reason to believe, adopted the anti-diabetic treatment and has carried it out fully. I prescribed no medicine at first, and that has been my custom, in order to see what the dietetic treatment will do of itself. In this case it has accomplished very little so far; and this case I am led to fear therefore will be one in which we can not expect much success from treatment of any kind. If the dietetic treatment does not succeed we have no other resources; that is, no medicinal remedy yet known will succeed. It may have a certain influence over the disease, but it will not effect a cure. Then I could mention other cases. A gentleman whom I have seen now for two years, who until lately has taken scarcely any remedies, but has carried out the dietetic treatment very faithfully, presents urine which gives no evidence of sugar whatever. He retains his strength mentally and physically; he is a man of great activity, being engaged in business involving large responsibility, able to go on with it, and finding the dietetic treatment perfectly satisfactory —finding no hardship.

Now, as to medicines, as I have said, a great number have been proposed from time to time, have been tried a short time, and then have passed out of use, others taking their place. This patient is not under my own care here. He is under treatment with the sulphide of calcium, a fifth of a grain three times a day, together with the dietetic treatment, so far as it can be carried out. With regard to this sulphide of calcium, one patient—a medical man in this vicinity who suffered from this disease —consulted me about three years ago, at which time he found that he had diabetes, adopted the dietetic treatment, relinquished his duties in town, which were exceedingly laborious, and went into the country, and his urine after a time showed no evidence of sugar. When I saw him last, which was a few months ago, I never seen him look better, and he said to me that he had never felt better in his life. And by the way, as an evidence that this disease may have existed some time before the patient's attention has been directed to any disease, this has been said to me over and over again by patients, even when the urine still contained sugar. They were not aware that they had any disease, as they felt much better than they had for months, perhaps for years before. They would not be aware that they had any disease were it not for a chemical examination of the urine. If they could put that out of view they would not have the consciousness of having any disease at all. This gentleman, who was a very able practitioner, was led to use the remedy that I have just mentioned from finding it recommended, as he told me, in some medical journal. He has the impression that the sulphide of calcium had considerable to do with his apparent cure. Well, I am free to say that when I talked with him about it my own belief was that he was apparently cured by the dietetic treatment, and by a change of habits of life, the avoidance perhaps of some excesses.

To one patient who came to see me I stated these facts with regard to that remedy, and I said, "If you feel no objection I will prescribe it for you." This was a case in which the dietetic treatment had been extremely successful, and most of the time there was very little if any sugar in the urine. I told the patient that the remedy in question would do no harm; that I thought I could say that. He said, "Well let us try it." I put him upon the remedy, beginning with small doses, and increasing them. I began in his case with an eight of a grain but I think we might begin with a quarter of a grain; in other cases I have begun with a quarter of a grain three times a a day, after a fortnight doubling it, going up to two grains, and continuing it indefinitely. Well, this patient went on in that way, and he is very much impressed with the idea that it has been of use to him. Now we must make some degree of allowance with regard to the opinion of the patient as to the effect of the remedy. I do not mean to say that the remedy has not been of value, but I do not feel as certain as the patient does with respect to its value. I am also prescribing the same remedy in three or four other cases, but the period during which it has been used is too short, I think, to enable one to form a correct judgment with regard to it. I shall certainly continue the use of the remedy, for it can do no harm; and moreover, it is a gratifying thing to the patient to be taking a remedy which he supposes may be of use. The moral effect of remedies, as people's views are now, is by no means inconsiderable; it is a factor which we cannot altogether ignore in the treatment of disease.

This disease I believe may be kept in abeyance indefinitely by appropriate dietetic treatment, and yet I am extremely doubtful whether a patient can ever properly consider that there is a permanent recovery.—*American Practitioner.*

THE ANATOMY OF GHOSTS.—The hypothesis offered by Mr. Francis Galton in explanation of the phenomenon of "mental images"—namely, that the mind builds up the mental picture on the foundation and with the materials furnished by external objects, as "children and sick people get faces and forms from paper-hangings and curtains"; the eye seeing little, and the mind supplying the rest of the idea, is not new, though it may be true.

Leonardo da Vinci, the great painter, showed his appreciation of this method in his direction "To compose a Battle Piece"—namely, to stare at a smoked and daubed wall until the confusion suggests the desired conception. And the same explanation has been submitted by all writers before and since the time and speculations of the author of "Demonology and Witchcraft." The chief merit of Mr. Galton's contribution to the literature of this subject is the admirable summary he has given of the known facts with regard to the association of sound and colour with form. The manner of this association is unimportant. It is the result with which we have to deal. Meanwhile, none of the theories or hypotheses raised by the expounders of hallucinations are entirely satisfactory, because they either do not recognise, or they practically disregard, some of the most potent factors in a class of experiences which has long constituted the opprobrium of introspective science. A man sees a ghost; to him it is as *real* as anything else he sees, and it is not to be explained away or accounted for by any reasonable process of argument. A reference to the power of the imagination will not satisfy the subject or victim of hallucinations. If he be weak-minded he will insensible come to believe in their reality; and, even if he be strong-minded, they will worry and annoy, perhaps mislead, him. It is, therefore, a matter of moment that what we may designate the anatomy of ghosts should be scientifically investigated. By way of suggestion, we venture to throw out the following hints. Every personality or consciousness has surrounding it an atmosphere of its own, with clouds of hazy impressions and nebulous thoughts and all the apparatus necessary for mental specters, from which the mind receives back more or less accurate, or distorted, reflections of its own ideas. In addition to this proximate source of "mental images"—which are external to the observer, and yet the mere reflection of his own mind—there is the remote, or true exernal, which is seen *through* the atmosphere, the surroundings or environment, of the mind itself. Such external objects as have a life and individuality of their own, have also *their* environments and systems of reflexes. So that what we see with the "mind's eye," when thinking of another person, is the aggregate or mean—or resultant—of our previous images of him. These images are made up of what we have in past times seen through our environment, and had reflected back from it, together with whatever impressions may now reach us through the environment of the person modified by his reflexes, and through our environment modified by the disturbing influences which it also must exercise on the impression we seem to receive. In short, every living object which is external is seen through two environments, and the image we form in our mind is modified by two sets of reflections. There is no such possibility as seeing things as they *are.* We see things as they are presented by the external and as we think of them. It is at once obvious how many sources of fallacy there are and how many possible ways of introducing new images, or of changing those which are transmitted, actually exist. A ghost may therefore be formed of materials cast up in either, or all, of four processes in the seemingly single and instantaneous mental act of observation. 1. We perceive an external object which suggests a thought of some person. 2. We seem to see the object in the form in which it has been presented to us on previous occasions and associated with remembered characteristics of colour and sound. Form, colour, sound, and even odour, or touch, stand on precisely the same footing as regards their mental associations and either may play the part of a first agent or keynote in producing the impression. 3. When we see a form or colour, hear a sound, smell an odour, feel a touch which has been associated in our minds with the form of an absent friend we may be, as it were, visited by his ghost, or, in other words, the fragment of real external will call up, seemingly around it, but actually in our minds, the complementary properties of the object. 4. Receiving the picture projected from without, adorned by the memory of previous impressions of its subject, we still further develop it, adding the impression of our own present reflections, and probably finishing the picture according to the mood of the moment, making the "mental image" grave or gay, and adapting it to the supposed associations of the individual as we think of him under the influence of any fear or fancy our minds may cherish with regard to his condition or circumstances. The whole of this building up or fashioning of ghosts may be comprehended within Mr. Galton's hypothesis, or it may not. We do not quite gather the fact from his lecture. It is easy to say that "the eye sees little and the mind supplies the rest of the idea"; but this would not be the whole truth, because the mind takes the material for its construction of the ghost organism, not wholly or even in great part from its own inner chambers of imagery, but from the physical record of impressions which, if, at the moment, past, were originally received and not conceived. We should be glad if the view actually entertained by Mr. Francis Galton could be more definitively communicated. The subject is one of great practical interest to the sick, and to many who seem, and believe themselves to be, sound of mind and body, to wit, the whole class of "spiritualists" or believers in spiritism.—*Lancet.*

WANDERING NEEDLES.

The London *Lancet* observes that the varagies of needles which have been introduced in the body, and have escaped immediate removal, have in all ages attracted the attention of collectors of the marvelous in medicine. Hildanus related an instance of a woman who swallowed several pins and past them six years afterward; but a more remarkable instance of prolonged detention was recorded by Stephenson, of Detroit—that of a lady, aged seventy-five, who last year passed by the urethra, after some months' symptoms of vesical irritation, a pin which she had swallowed while picking her teeth with it in the year 1835—forty-two years previously. Occasional pain in the throat was the immediate symptom, but in 1845 she was seized with severe gastric pain, which passed away, and she had no symptoms until hæmaturia in 1876. This curious tolerance of such foreign bodies exhibited by the tissues is often observed in lunatic asylums. M. Silvy recorded some years ago the case of a woman who had a penchant for pins and needles so strong that she made them, in effect, part of her daily diet, and after her death 1,400 or 1,500 were removed from various parts of the body.

Another case almost as striking has been recorded by Dr. Gillette—that of a girl in whom from time to time, needles were found beneath the skin, which they perforated, and were removed by the fingers of forceps. Concerning the way in which they had got into her system no information could be extracted from her. She was carefully watched, and in the course of eighteen months no less than 320 needles were extracted, all being of the same size. Most were black and oxidized, but some had retained their polish. The majority were unbroken. They passed out of various parts of the body above the diaphragm at regular intervals, but in a sort of series and always in the same direction. The largest number which escaped in a single day was 61. A curious phenomenon preceded the escape of each needle. For some hours the pain was severe, and there was considerable fever. She then felt a sharp pain, like lightning in the tissues, and on looking at the place at which this pain had been felt, the head of the needle was generally found projecting. The needles invariably came out head foremost. No bleeding was occasioned, and not the least trace of inflammation followed. The doctor in attendance extracted 318. They were sometimes held firmly, and seemed to be contained in a sort of indurated canal. It was conjectured that they had been swallowed with suicidal intentions; but, on the other hand, the way in which the needles escaped in series, and their direction with the head outwards, suggested that they had been introduced through the skin.

That little weight is to be attached to the pace at which the needles escape as proof of their mode of introduction is evident from a case recorded by Villars, of a girl who swallowed a large number of pins and needles, and two years afterward, during a period of nine months, 200 passed out of the hand, arm, axilla, side of thorax, abdomen, and thigh, all on the left side. The pins curiously, escaped more readily and with less pain than the needles. Many years ago a case was recorded by Dr. Otto, of Copenhagen, in which 495 needles passed through the skin of a hysterical girl, who had probably swallowed them during a hysterical paroxysm; but these all emerged in the regions below the level of the diaphragm, and were collected in groups, which gave rise to inflammatory swellings of some size. One of these contained 100 needles. Quite recently Dr. Bigger described before the Society of Surgery of Dublin a case in which more than 300 needles were removed from the body of a woman who died in consequence of their presence. It is very remarkable in how few cases the needles were the cause of death, and how slight an interference with function their presence and movement cause. From time to time their detection by a magnetic needle is proposed as a novelty; but, as Dr. Gillette reminds us, this method was employed by Smee nearly forty years ago, and has often been adopted since.

ABSTRACTS.

"Qui e nuce nucleum esse vult, frangit nucem."

COLOUR-BLINDNESS. — A valuable contribution to our knowledge of colour-blindness has been made by Dr. de Fontenay, of Copenhagen, who has published the result of his researches in the *Nordiskt Medicinískt Arkiv* for 1880. He follows the classification proposed by Holmgren: 1. Total colour-blindness; 2. Partial colour-blindness: (*a*) complete blindness of red, green, or violet; (*b*) incomplete colour-blindness; (*c*) feeble sense of colour. The last is not Daltonism, properly so-called, and is omitted in the statistics. The examinations were made by means of Holmgren's coloured wools; and in some of the cases, in which colour-blindness was detected, the results were controlled by various additional tests.

The total number of persons examined by Dr. de Fontenay was 9,659, of all ages from eight years upwards; 6,945 being above the age of sixteen, and 2,714 below that age. Of the whole number, 217, or 2.25 per cent., were colour-blind. Of 4,492 adult males, 165, or 3.7 per cent., had colour-blindness. Among these, 1,001 belonged to the upper classes, and showed a percentage of 3.09; while in 3,491 artisans, labourers, etc., the percentage was 3.87. The percentage of colour-blindness varied greatly with the employment of the individual: thus, of 2,737 railway officials, 3 per cent. were colour-blind; of 183 post-office officials, 9.28 per cent.; of 930 artisans of various kinds, 3.22 per cent. It is not certain how far these proportions, are accidental, or how far the greater prevalence of colour-blindness in the lower orders may be due to defective cultivation of the sense of colour, or to heredity. In any case, Dr. de Fontenay's observations agree with those of Holmgren, Magnus, and others. In order to render his results as exact as possible, Dr. de Fontenay did not confine his researches to a single part of Denmark, but extended them over the whole country.

Of 6,945 adults above the age of sixteen (4,492 males and 2,453 females), 176, or 2.56 per cent., were colour-blind. Among the females, there were only 11 cases of colour-blindness, or 0.45 per cent. Adding to these the female children who were examined, a total is obtained of 3,819, among whom there were 16 colour-blind individuals, or 0.42 per cent.; while, in a total of 5,840 males (adults and children), the number of cases of Daltonism was 201, or 3.44 per cent. All the sixteen colour-blind females belonged to the working classes. Among the 2,714 children, aged from eight to sixteen, 41, or 1.51 per cent., were colour-blind—viz., 1,348 boys, with with 36 cases of Daltonism, or 2.67 per cent.; and 1,366 girls, with 5 colour-blind, or 0.37 per cent.

Two cases of violet-blindness, which were incompletely examined, being included, there were found to be 56 cases of red-blindness, 24 of green-blindness, and 135 of incomplete colour-blindness. In all the cases both eyes were examined separately, and found to be affected. As regards the relation between the colour of the eyes and colour-blindness, Dr. de Fontenay does not find any special predominance of color-blindness in dark or in fair individuals.

With regard to the hereditary transmission, exact information was obtained in 34 cases, in 27 of which heredity was denied. In two of the cases, the fathers were colour-blind in the same way as the subjects examined. The parents of another had normal vision; but a paternal uncle, two brothers, and the son of the person examined were colour-blind. In the parents and grandparents, and the son, of another person, the colour-sense was normal; but his brother and three maternal uncles had colour-blindness. In another case, the perception of colours was normal in the father, mother, brother, and sisters; but the maternal grandfather, a maternal cousin (male), and the son of a female cousin on the mother's side, were the subjects of Daltonism. Another of the colour-blind persons had four relatives who were similarly affected: a maternal uncle and cousin, his mother's grandfather, and a brother. There was no instance of consanguineous marriage among Dr. de Fontenay's cases of colour-blindness.

The original paper contains a table of the 217 cases of colour-blindness, in which particulars are given as to the age, the colour of the eyes, the question of heredity, the result of examination with Holmgren's test, and also with other methods when employed, and the diagnosis. The author shows an extensive acquaintance with the literature of the subject; and quotes frequently, for the purpose of illustration and comparison, from the writings of Holmgren, Gladstone, Magnus, Cohn, Joy Jeffries, Wolfe, and others, who have investigated it. He says that the increased attention paid to colour-blindness within the last few years, has been attended in Denmark with some important results. All the *employés* of the public (State) and private railways have been examined, in order to ascertain their sense of colour (except in the case of one private company, which did not think such an examination necessary); and henceforth all candidates for situations on railways are to be tested as to their perception of colour. No law on the subject, however, has as yet been enacted; nor has any regulation been made with regard to the navy and mercantile marine, beyond obliging candidates for admission to the school of naval officers to submit to an examination.

Herr E. J. Mellberg, principal teacher of physics in the Lyceum at Helsingfors, has also examined the colour-sense of 277 pupils in that institution. Among them, he found ten cases of Daltonism, or, 4.4 per cent.; four of red-blindness, one of green-blindness, two of violet-blindness, and three of incomplete colourblindness. In addition, among the boys whose sense of colour is stated to be normal, there were three who confounded light yellowish-red with rose-colour; eighteen who could not distinguish between bluish green and pure green; fourteen who failed in both respects; and nine in whom the perception of colours was weak. The ages of the subjects varied from nine to twenty; and only one case of colour-blindness was met with in three above the age of seventeen.

The theory of Young and Helmholtz is regarded by Herr Mellberg as incapable of explaining, completely, either normal vision or colour-blindness. In his opinion, the eye possesses separate organs of perception—not only for three or four different colours, but for all the shades which can be distinguished; and colour-blindness, properly so-called, consists of incapability to receive the impression of a shade of colour, and it is not necessarily connected with the impossibility of distinguishing between the impression received and the other colours of the spectrum.

Case of Croup Treated by Passing Catheters into the Trachea by the Mouth. By J. Wilson Paten, M.D., M.R.C.S., Rockferry.

In the *British Medical Jonrnal* for July 24th and 31st, 1880, are two papers by Dr. Macewen, on the Value of Tracheal Tubes introduce by the Mouth in Œdema Glottidis, etc. The cases he records are all in adults. I am not aware that this treatment has been used in children; but its simplicity and advantages are so great, that a few notes of a case of croup in which catheters were used may be interesting.

H. J., aged three years and ten months, had measles, the rash appearing on February 15th, 1881. On the disappearance of the rash, a hard cough supervened, which gradually increased in severity till March 1st.

On this date, I found him, at 1.30 A.M., suffering from intense dyspnœa, quite unable to speak, and his lips of a dark livid colour. His cough was constant, brassy, and without expectoration. The respirations were thirty-five per minute, the cartilages of the ribs and sternum being drawn in at every effort to breathe, and crepitation existing over both lungs. The fauces were healthy. The pulse was 144, very weak.

Having a No. 11 prostitic catheter with me, I determined to pass it into the trachea instead of performing tracheotomy. Watching an opportunity, while the tongue was depressed with a spoon, the catheter, curved a little more than usual, was passed into the trachea, during an attempted inspiration, and without the slightest difficulty. A severe struggle followed, lasting perhaps a minute or two, the face becoming purple, and the eyes staring with fully dilated pupils. The paroxysmal efforts to expel the tube being unsuccessful, a pretty full inspiration, partly through the tube and partly through the larynx, followed; about two ounces of frothy, bloody, and purulent mucus were ejected by the tube and the mouth; the livid colour disappeared, and he lay down breathing easily through the tube. The presence of the tube did not prevent his swallowing milk, although sometimes a little of this was ejected from it during a cough. The tube was retained *in situ* by a strip of plaster; and the teeth were prevented from closing on it by means of a pear-shaped piece of hard wood.

Six hours afterwards, he was much easier, and could say "Yes" and "No" distinctly. The cough continued at intervals of ten minutes, and did not seem altered in character by the presence of the tube. Crepitation still existed over both lungs, an abundant muco-purulent secretion being passed both by the tube and the mouth. Hitherto he had been kept in a warm room: but now a bronchitis-kettle maintained a moist temperature of 70° Fahr. The tube was removed without any inconvenience after it had been in the trachea for eleven hours, as he had bitten it, and no air was passing through it. Shortly after its removal, symptoms of obstruction gradually reappeared. During the same evening, another ordinary gum-elastic catheter No. 12 was introduced, only a slight momentary struggle and cough supervening. The presence of the tube led again to a very free expectoration of mucus. In the course of a few hours, the respirations and pulse became lower, and crepitation and dyspnœa ceased. When the tubes had been in for forty-eight hours and a half, it was removed, and not again introduced. On March 8th, the voice and chest sounds were normal; and he was not seen after the 10th.

This case was a severe one, and would soon have ended fatally, had no operation been performed. Tracheotomy seemed inadmissible, neither the case nor the surroundings being favourable for it. *Primâ facie* it would be expected that the introduction of a tube into the traches of a child against its will would not be so easy as in a consenting adult. That may be so; but it is certain that the operation is extremely easy and simple, and does not take more than two or three seconds from touching the tongue with the spoon till the tube is in the trachea. Had tracheotomy been performed successfully, when would the child have been out of danger? Certainly not so soon as here recorded; for, at the end of the third day, the child was so well as to be able to breathe freely without the tube, and was quite well before the tenth day after the operation.

Treatment of Frequently Recurring Erysipelas of the Face. By JAMES BRAITHWAITE, M.D., Leeds, Eng.

This affection is very annoying to the patient, for, in spite of every precaution, it will recur again and again. If any cause can be discovered, such as bad drainage, it should at once be remedied; but, whatever other hygienic or medical treatment be employed, some local application is generally necessary. All these applications are either disfiguring or disagreeable, or totally inefficient. For many years, my father and I have used with entire success a strong solution of tannin (four to eight grains to the drachm of spirits of wine and water), This application, which is not disagreeable to to the patient, should be painted over the parts affected with a soft brush every two or three hours, and allowed to dry, the patient being careful to keep the face from the fire. If there be a tendency to frequently reccurring erysipelas, it is well to keep the tannin at hand, as it will always arrest a threatened attack.—*Brit. Med. Jour.*

BLISTERS.—In a communication to the Société de Thérapeutique, published in the *Revue de Thérapeutique*, p. 152, M. Cornil states that, when cantharides is administered to an animal—for instance, to a rabbit—either by the mouth or by absorption through the skin, as when a blister is applied, poisoning is produced, characterized by cystitis, nephritis, and inflammatory lesions in the liver and in the lung. In fact, twenty minutes after the cantharides is injected, the following lesions are found in the cavity of a glomerule of the kidney. A large number of white globules are found between the envelope of Muller's capsule and the vascular bundle which composes the Malpighian glomerulus. In addition, a granular exudation is found in the uriniferous tubes, which fills and obliterates their calibre. At the end of an hour, the lesions are characterized by the proliferation of the cells, which, by mutual pressure, become irregularly flattened. There exists, therefore, a true catarrh of the uriniferous tubes. In the bladder, the disturbances are nearly of the same kind, but the lesions are superficial; the irritating principle of the cantharides has acted directly on the internal surface of the bladder. In the lung, the small bronchial tubes are filled with white pus-corpuscles; these lesions, which indicate inflammation of the mucous membrane, are found in all the parenchyma, and are the consequences of the irritating principle, the cathardine carried into all the organs by the circulation. The same kind of lesion of its mucous membrane are found in the larynx and in the trachea. If a blister be left on sufficiently long, the same lesions are obtained. M. Cornil therefore thinks that large blisters applied to the chest, and left on from fifteen to twenty hours, are more injurious than useful. By this method, not only are cystitis and nephritis brought on, but inflammation of the bronchi and of the pulmonary parenchyma itself. He has, therefore, arrived at the conclusion that, in order that blisters should not be injurious, they should not be allowed to remain on more than from three to four hours. —*British Medical Journal.*

RESECTION OF THE STOMACH.—During the recent meeting of the German Surgical Congress in Berlin, Dr. Mikulicz brought under notice the two cases of resection of the stomach which have already been mentioned in this Journal as having been performed by Professor Billroth, and also a third case, in the practice of the same surgeon. This, like the second, ended fatally; the result being due, in part, to the exhausted condition of the patient, and, in part, to the extensive adhesion of the stomach to adjacent parts. It was pointed out that the result here—as well as in the second case, which was complicated with extensive adhesions—indicated that excision of the stomach was not advisable when such were present, especially when the stomach was adherent to the pancreas. It appears that Billroth was anticipated in the operation by Dr. Rydgier of Kulm, who, on November 16th, 1880, performed excision of the stomach on a man aged 69, who, however, was in too feeble a condition for the operation to be successful. This case was not published, and was not known to Dr. Billroth when he performed his first operation. Preparations from Dr. Billroth's and Dr. Rydygier's cases were shown at the meeting; and Dr. Mikulicz demonstrated the method of performing the operation. Another case has to be added to the list. On April 8th, Dr. Wölfler, assistant to Professor Billroth, performed resection of a cancerous pylorus on a man aged 52. The case was regarded as favorable for the proceeding on account of the mobility of the tnmor, which was apparently about the size of a hen's egg. The operation, which lasted two hours, was not followed by fever nor by vomiting, and the patient was able to take fluid food two days later. On the tenth day he ate, with good appetite, a veal-steak; and, a fortnight after the operation, was in a most satisfactory condition. The wound in the abdominal wall had healed by first intention, and without any constitutional disturbance.—*British Medical Journal.*

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CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

Two Cases of Cerebral Embolism Marked by their Rapid Course and Febrile Symptoms. By W. HOWSHIP DICKINSON, M.D., Physician to St. George's Hospital, and to the Hospital for Sick Children.

CASE I.—Rachael E., aged 13, was brought into St. George's Hospital, on January 16th, 1879, with symptoms which were suggestive to those who first saw her of either tubercular meningitis or typhoid fever. It was said that she had been quite well until two days before, when she woke up in the night with severe pain in the head generally, rather than at any particular spot, and in the region of the heart. She afterwards complained of "pins and needles" in the left arm and leg; and the mother noticed that the child could not move her left hand. No squinting was noticed, but the eyelids were thought to droop. She did not appear to recognise those about her. No affection of speech was noticed previously to her admission. There was no vomiting, excepting once after some ginger-beer, and no constipation. There had been slight bleeding at the nose.

On admission she was delirious; tossing about wildly, and struggling much when lifted for the purpose of examination. The eyes were closed, the pupils dilated and equal; no paralysis could be made out. She could not be got to swallow food, biting at the spout of the feeder when it was presented to her. She appeared to be generally unconscious of her surroundings, and was for the most part speechless, though she used a few words articulately, and not wholly without correctness of application. She often put her hand to the right side of her head with the cry, "Oh, dear!" She repeatedly called "Mother," though, when spoken to by her mother, she gave no sign of recognition; and once, shortly before her death, she said "No, thank you," in refusing some ice which was offered to her. I mention these details to show that her speechlessness was more akin to her delirium than to aphasia.

She vomited yellow matter frequently, independently of food; there was much grinding of the teeth; the pulse was quick and full; the temperature 102°, both morning and night. On listening to the heart (a matter of some difficulty by reason of her incessant movements), a loud mitral systolic murmur was heard; and, upon this, a further inquiry into her antecedents elicited the statement that she had been a patient in the hospital, nine years before, with vomiting of blood and bleeding at the nose; that, since that date, she had been, as was thought, the subject of heart disease; and that the epistaxis had recurred, under mental excitement, three months before her death.

With regard to diagnosis, typhoid was contraindicated by the height of the fever at so early a date; tubercular meningitis, by the abruptness of the attack. Taking the concurrent circumstances into consideration, I had no difficulty in forming the conclusion that the mischief was cerebral embolism; and that this declaration by general fever, rather than by hemiplegia, or other local paralysis, was probably due to the emboli being disseminated rather than the localised. Bicarbonate of potash and nitre were ordered in this view, and the patient was fed by the rectum, as it was impossible to get her to swallow. The child rapidly grew worse; she became quite unconscious; the masseters were hard, and the teeth firmly clenched; the chest became full of loud *râles;* there was much exaggerated thoracic movement, and evidence of dyspnœa; the pupils became widely dilated, and the eyes quite insensitive; and she died on the day after her admission, the fourth day of her illness.

On *post mortem* examination, it was found that the heart was extensively diseased; it weighed eleven ounces. The mitral and aortic valves presented thickening of old date, and there were two rough fibrous patches covered with fine granular fibrine—one on the wall of the left auricle, the other on that of the left ventricle. The meningeal vessels were full of blood, and the brain in general slightly congested. Upon the surface of the pia mater were numerous minute red spots, some consisting obviously of small extravasations, requiring a magnifying glass to display their character. These small spots of hæmorrhage were always disposed upon the course of an artery; and it was made out with regard to many of these, that in the artery, just where the point of blood was outside, it was a minute clot of decolorised fibrine. The minute spots of hæmorrhage were on or in the substance of the pia mater; they had no tangible thickness. A few very minute embolisms were found in the substance of the brain; but the larger arteries were examined in vain for evidence of any larger obstruction. There was no softening. The appearances presented by the brain are shown in a drawing, for which I have to thank my friend Dr. Drewett. I need not describe the other organs in further detail than to say that the lungs were congested, and that well-marked embolic blocks were found in the liver, spleen, and kidneys.

CASE II.—The second case is nearly parallel to the first. The subject of it was a girl named Constance S., aged 18, who came under my care at St. George's Hospital on April 9th, 1879. She had had the usual infantile complaints, but never rheumatic fever, so far as was known; and passed for well until three days before admission. On Sunday, she was noticed as pale. On Monday, she was giddy, drowsy; had severe pain in the the frontal region, and vomited whenever food was taken. On Wednesday, she was very feverish, with a temperature, as was reported, of 105°, and on this day was brought to the hospital. She had hitherto been perfectly sensible.

On admission, she lay in a drowsy condition; from which, however, she could be easily roused. The skin was hot (temperature 104.8°), dry and dusky. There was much intolerance of light; the eyelids were partially closed; the pupils contracted and sensitive. There was external strabismus of the right eye; but no other evidence of paralysis could be detected. There was slight frontal headache, but no twitching or convulsion. The pulse was at the rate of 120; the tongue red in the centre and at the tip; elsewhere coated with white. The urine presented a trace of albumen. There was no diarrhœa; no abdominal fulness or gurgling; no typhoid spots. Although there was nothing to draw attention to the state of the heart but the cerebral symptoms, a loud systolic mitral murmur was detected on examination, together with an excess of impulse and a marked præcordial thrill. The sudden beginning of the febrile symptoms, their rapid advance, the coexistence of the heart disease, and the close resemblance which this case presented to the one previously recorded, led, as in that case, to the diagnosis of disseminated cerebral embolism, and to the use of alkalies; bicarbonate of potash being ordered in doses at first of eighty grains every three hours, together with carbonate of ammonia

Next day, she was in much the same condition, except that there were paroxysm of severe pain in the fontal region, and more or less constant aching behind the head. Bronchitic wheezing was heard over both lungs. The temperature was slightly lower, ranging from 103.2° to 104.6°; sordes collected about the mouth; the tongue became red and dry; and the general aspect of the patient was almost exactly that of typhoid. No *tache cérébrale* could be elicited. The urine was now alkaline. The potash was diminished, and quinine added. Without any further symptoms or abatement of the fever, the drowsiness deepened into insensibility; and in this state she expired on the morning of April 12th, on the seventh day of the disease, the third after admission.

On *post mortem* examination, the heart was found to be the subject of both old and recent disease. The mitral valve was greatly thickened, and its opening narrowed by about one-third. On the auricular surface was a patch of roughness due to granular fibrine; and at this position was attached a long thin semi-gelatinous vegetation, which hung loosely from the valve, and was probably more recent than the granular fibrine at its base, and dated, perhaps, not much before the completion of the act ot death. On exposing the membranes of the brain, a number of small hæmorrhages, which varied in size from a pin's head to a sixpence, were found on the pia mater under the arachnoid, mostly over the convexity of the brain. In the centre of these, a small white speck could be seen, which minute examination proved to be a small pale clot within an artery. In connection with several such spots, were small localised effusions of yellow lymph on the pia mater external to the affected vessel. There was no lymph at the base, nor any on the convexity, except in connection with the vessel affected as described. These changes were confined to the surface of the brain; all the internal parts were natural, as far as could be seen. There was no softening, nor excess of blood in the ventricles. The lungs were congested. Many small embolic blocks were found in the spleen, with one patch of softening, which apparently had a similar origin. In the liver were several minute white disposits, surrounded by congestion, evidently of the same nature; and several embolic obstructions were found also in the kidneys.

REMARKS.—The two cases were similar in almost every particular. The subjects of both were girls; the leading symptoms in both were high fever and delirium, without any—or with scarcely any—definite paralysis, or the aphasia so common with cerebral embolism. The temperature in one case was always between 102° and 103°; in the other, generally between 103° and 105°. In both, there was much evidence of pulmonary congestion with the progress of the disease, and rapid death by coma. With both, there was a resemblance to meningitis in the headache, the vomiting, and the mental disturbance; while in neither was there the constipation which is general at least with the tubercular form of this inflammation. In both, the resemblance to a specific fever, especially to typhoid, was superficially evident; but the fever was too high, and the cerebral embarrassment too great, for so early a date in the course of that disease. The resemblance to an acute specific fever was indeed striking, and might have been misleading, had the cases been observed hastily, or in disregard of the concomitant circumstances. The pathological condition was, in a word, the distribution through the brain of embolic dust, which was so fine as to traverse without hindrance the larger arteries of the base and substance, to be finally arrested in the minute channels of the pia mater.—*British Medicat Journal.*

A Case of Removal of the Uterine Appendages. By LAWSON TAIT, F.R.C.S.

SO much interest is being expressed in the operation which has been termed "oöphorectomy", and there is so much of a disposition to prejudge it, that I desire briefly to describe one of my recent cases in which, like many others, my only regret is that, instead of temporising so long with the patient as I did, I did not press the only real remedy which the case admitted. I have reason to believe that many unfounded rumours are abroad, that those who have adopted a wide extension of abdominal section are operating in a reckless fashion. I can only say that in my own practice I think no evidence of this will be found, and the following case will prove much to the contrary.

Mrs. L., aged 34, was sent to me by Dr. McLintock of Church Stretton in September 1878. She had been married four and a half years, and had one child in 1875. Since her confinement, she had never been well, and had suffered from symptoms which clearly were those of subinvolution and retroflexion. She had profuse menstrual hæmorrhage; and, on consulting a physician in July 1878, she was told she had a tumour behind the womb, and that the womb must be dilated and the tumour removed. For this purpose, a sponge-tent was introduced, and left in, according to her reiterated statement, for nine days. She suffered from an attack of acute "inflammation of the bowels", and was in bed for seven weeks. This incident occured, I am pleased to say, neither in Church Stretton nor in Birmingham. When she came to me on September 24th, 1878, she was in a wretched state of exhaustion and emaciation. I found a mass on the right side of the uterus, which fluctuated indistinctly. The uterus was retroflexed, and fixed completely by perimetric effusion. I tapped the mass, and removed about four ounces of pus from what I now know was an abscess of the right ovary. She was much relieved, and returned to Church Stretton under Dr. McLintock's care, and slowly gained some strength. She never made anything like a recovery, however; and her medical attendant sent her back several times to me, and together we carried on a great variety of treatment without much benefit. The uterus remained fixed, and all efforts to replace it were so painful that she could not endure them. She could not bear intercourse; she never was a day without pain; and her life was fitly described as a burden to her and her relatives.

Dr. McLintock sent her down to me again at the end of last February, and in his letter he told me he was sure something more must be done if our patient's life was to be saved. I found that the mass on the right of the uterus was just as I had left it; that the uterus was still fixed and retroflexed; that there was now a more clearly defined mass to the left of the uterus; and that the whole roof of the pelvis was exquisitely tender to the touch. Her temperature went up at night, and she had night-sweats; and, though I could feel no fluctuation, I had no doubt there was pus somewhere. I therefore advised and performed an exploratory incision on the 6th of March. I found the pelvis roofed over by adherent coils of intestine, which I lifted with much trouble. Below these, the whole of the organs were matted together, and their identification was a matter of the greatest difficulty. Finally, I succeeded in recognising the right Fallopian tube, distended into a cyst, with greatly thickened walls, and full of pus. Below it, and intimately adherent to it, lay the ovary, as large as an orange, and containing some old cheesy matter—the remains, probably of the abscess I had tapped two years and a half before. The uterus was bound down in the *cul-de-sac* by old adhesions, and from these I relieved it. I found the left ovary adherent below the fundus; and from it the left Fallopian tube ran a circuitous course, like a sausage in appearance, and adherent to the brim of the pelvis, the uterus, and a piece of small intestine. It contained about two ounces of pus. I removed both ovaries and both tubes, cutting the latter off close to their uterine attachments. The hæmorrhage during the operation was very troublesome, but was controlled by sponge-pressure. Mr. J. Raffles Harmer assisted me, and Mr. Wright Wilson gave ether.

The patient has recovered without a bad symptom, and is perfectly free from pain for the first time since the incident of the sponge-tent. The uterus is (to-day) perfectly free, and any movement of it gives her no pain. My only regret about this case is, that I did not operate two years ago.—*British Medical Journal.*

CASE OF RETENTION OF MENSTRUATION WITH REGURGITATION IN LEFT FALLOPIAN TUBE. Reported by DR. E. S. LEWIS, Prof. Obst. and Gynæcology, Univ. of La.*

The relation of cases of exceptional occurrence and presenting unusual features, establishes precedents for future guidance, which cannot be overestimated and ofttimes influences results favorably.

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* Those who read carefully the paper on "Open Fallopian Tube," by J. Mathews Duncan, in the last number will be much interested in this article from the *N. O. Med. Journal.*—E. S. G.

The case to be related is that of Josephine B., a native of New Orleans, of German parentage, aged nineteen years. She is tall, well formed, of a sanguine-nervous temperament. She had never menstruated, and with the exception of occasional cramp-like pains in the abdomen, and the discomfort produced by abdominal enlargement, enjoyed pretty fair health. Four years previously her urine was drawn once by a physician, because of retention. Examined in the dorsal decubitus, the abdomen was found occupied by two tumors, evident on inspection and palpation. The large one, in the median line, presented a pyriform shape and extended to two fingers' breadth above the umbilicus; its size being that of a seven months' gestation. The other was the size of a turkey-egg, situated on a level with the umbilicus, to the left, and closely connected with the larger tumor, a sulcus separating the two, the shape nearly circular. Fluctuation was readily detected in both, though more apparent in the smaller. A vaginal examination disclosed an imperforate hymen stretched in its circumferential area to the size of a silver dollar, tense and bulging and of a purplish blue color. The diagnosis of menstrual retention was established, with regurgitation in left fallopian tube producing the smaller tumor.

The gravity of such a condition under whatever treatment pursued, whether by slow or rapid evacuation of the contained fluid, is generally recognized. "The difficulty," Hewitt states, "is not in affording relief to the patient and giving an outlet to the pent up menstrual fluid, but in preventing the death of the patient from the operation." Hewitt and Bernutz, and Barnes, recommend gradual evacuation, the two former by valvular opening, the latter by the aspirator trocar. Emmett, whose experience is limited to but two cases, with an average amount of accumulation not exceeding six ounces, advocates a free opening and rapid removal. West mentions but two cases in his personal experience, and is also in favor of a crucial incision. The limited number of such cases falling into the hands of the specialist is easily accounted for outside of their infrequency. The thrust of a trocar or the prick of a lancet affords the desired relief, and the dangers are not perhaps fully appreciated.

After deliberating upon the different operative procedures, aspiration was resolved upon as offering greater immunity from accidents. Accompanied by Drs. DeRoaldes and Miles, who examined the patient, the hymen was punctured with the finest needle of the aspirator, and six ounces of a tarry fluid removed. The following days, May 14th, 15th, 16th, as much more each time was abstracted without visibly altering the bulk of the uterus. On the 17th, finding the flow of the now thicker fluid very slow in the cylinder, the largest trocar in the case was substituted, and nine ounces were withdrawn. In all thirty-three ounces were withdrawn. The opening made by the trocar allowed considerable escape of fluid after its removal, which continued until my next visit, at 6, P. M., on the 18th. Entering the room, a most disagreeable odor pervaded the apartment. Found my patient pale, with a pulse of 120, and a temperature of 102½°; some tenderness over the abdomen. Was told she had been delirious during the night. Decomposition had taken place in the fluid from the admission of air, and had produced septicæmia. Satisfied that nothing short of complete evacuation of the uterus would now be safe, a circular piece of the hymen was removed, after which fully two quarts (estimated, not measured) of offensive menstrual fluid were discharged. The cavity of the uterus was then thoroughly sponged out with weak carbolized tepid water, until the fluid came away perfectly clear. The patient was then given 24 grains sulph. quinine, in 4 gr. doses, hourly. When seen again that night, five hours later, the temperature had fallen to 100°, and her general condition was satisfactory.

May 19th, seen morning and evening; no fever; a little florid blood was discharged from vagina, but without odor. Did not repeat injections. The smaller tumor remained unaffected by the evacuation of the uterus, and evidently no longer communicated with its cavity. What to do with it was the next question to be resolved upon. May 20th, patient still comfortable and without fever. The evening of the same day, at 4 P.M., she was seized with so acute a pain as to utter screams. I did not see her before 6 P.M., and found her frightfully changed. Pinched and discomposed features with corpse-like pallor, cold skin, bedewed with perspiration, thready pulse, vomiting and great tenderness over the abdomen. The symptoms were those of general peritonitis or of hæmatocele. My first idea was of rupture of the fallopian cyst, but upon examination it was undiminished in size. The suddenness of the invasion, whilst turning in bed seemed rather to point to rupture of a blood vessel, which a vaginal exploration confirmed. The vagina, which the day before was sufficiently relaxed for the introduction of the hand, now offered an obstacle to the introduction of two fingers, the anterior wall feeling tense and elastic, and the cervix beyond reach. From the peritonitis which succeeded the following day, in all likelihood there was escape of blood in the peritoneal cavity also. Prescribed ice and small quantities of iced brandy and water; gave a hypodermic of a quarter of a grain of morphia, leaving a prescription of morphia, should the suffering continue.

May 21st, 9 A.M., reaction had taken place; skin warm; temperature 103°; pulse 110. Great tenderness over lower part of abdomen as high as umbilicus, some tympanitis, still vomiting, but less frequently. Prescribed effervescing drinks, lumps of ice; gave a hypodermic of a quarter of a grain of morphia and belladonna; applications over abdomen. At 6 P.M., found pulse 120, tem. 103½°; same treatment continued.

During the two weeks which followed, the temperature and pulse were recorded twice daily. After this period for about a month longer she continued with fever, but as she was not seen every day, I have taken no note of it. At the end of the first week, the lower portion of the abdomen, as high as the umbilicus, was dull on percussion, and hard from fibrinous exudation. At the end of the second week the inflammatory symptoms had entirely subsided. Counterirritants were used to promote absorption, and small doses of iodide of potash administered internally. The exudation disappeared slowly. On the 15th of June aspirated the smaller tumor, using the finest needle in my case. About four ounces of menstrual fluid were abstracted. It was unchanged and odorless. I was led to do this, owing to the continuance of the fever, which I attributed to septicæmia, possibly from decomposition of the fluid in the fallopian tube, which I thought might have been affected by the decomposed fluid in the uterus. The tumor diminished in size, but in a week's time attained its former development. Aspirated a second time, using a larger trocar, Dr. Logan assisting, removing a sanguineo-purlent fluid. Injected a little carbolized water in sack. This gave but temporary relief. The symptoms of septicæmia continued, diarrhœa set in, disagreeably complicating the case. Resolved to enlarge the opening and establish a drain. Dr. Mioton administered chloroform to the patient, and I cut down upon the tumor, making an opening about an inch in length. The cavity was thoroughly washed out, and a tent introduced. Daily injected carbolized water. Under this treatment she rapidly improved, and was convalescent in two months after the first aspiration of the hymen. The fistulous opening resulting continued to discharge for several weeks, finally closing. She now is in perfect health; mensturates every month without pain.

Extra-Uterine Fœtation. Remarkable Case. By EDWARD C. ANDERSON, M.D., Powells Mills, Green Co., Ga.

Mrs. H., aged 24, an American, the wife of a factory operative; one labor two years previous, in which the child after quite a protracted labor was delivered with instruments. The vagina was greatly lacerated, and on healing, the cicatrised bands came very near closing about one inch of the outer portion of the vagina. A canal about the size of a large knitting needle was all that was left of this portion of the vagina. The above history I get from her family physician.

I was called January 29th, 1881 to see her in her second labor, in consultation with Drs. Brightwell, Elder and James. She had been in labor 32 hours when I arrived. Upon examination, which could only be made by a partial introduction of the index finger through a slightly dilated, but still greatly constricted and cicatrised vagina, and one hand upon the abdomen, I immediately diagnosed extra-uterine fœtation, which had not been previously discovered. The head of the child, at the time of my first satisfactory examination, 35 hours after labor had set in, showed that the child's head had been pressed downward upon the vagina with a covering (a fold of the peritoneal sac and a fold of the vagina, each being in a diseased condition were very thin) very tightly stretched, which in a short time gave way, and the head was then in the vagina proper, between the os uteri and the constriction. The cicatrised constriction was dilated, and the child delivered 60 hours after the first symptoms of labour made their appearance. It was a large male child, greatly cyanosed, and it was with much difficulty that I got respiration and circulation set up. The child has been nursed from a bottle and is now a fine healthy boy. Upon examination I found the placenta firmly attached to the peritoneal sac, low down in the right iliac region.

The mother died five hours after she was delivered. Upon examination the uterus was found to be about four inches long and greatly diseased. Portion of the walls being about one and one-half inches thick, while other parts were not more than the sixteenth of an inch thick.

MEDICAL SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

General Lower Extremity Splint.—Extension and Counter Extension by Weight of Limb. By DR. A. CLENDINEN, Fort Lee, N. J.

At the annual (April 12th, 1881)

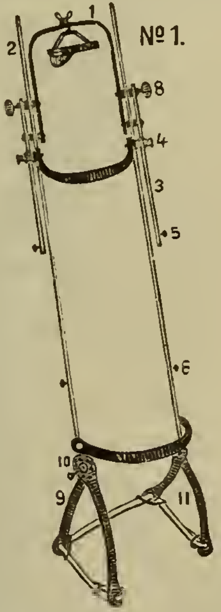
meeting of the Bergen Co., N. J., Medical Society, the President's (Dr. C.) address consisted of a "Resumè upon *Fractures of the Lower Extremity*," noting their several peculiarities and treatment by various surgeons of the past and present; with detailed description of the different splints used. The doctor's experience in the army had made him adverse to the *flexed* position. He spoke of suspension as the first requirement and of the various crude splints wherewith he had obtained it. He said that no suspensory splint yet introduced was of itself capable of counter extension. He spoke of the "anterior splint" of Dr. N. R. Smith, of its cheapness and simplicity, but said that the first objection to it was not only its flexion, but its in fact necessary flexion—without which we would be deprived of the popliteal hold for plasters, and traction, for extension. This extension was when effected, at the expense or give way of plasters above the line of fracture, if of the femur, but if of the tibia and fibula, there was in fact little extension practicable. The second objection was inadequate support of thigh, often resulting in angular deformity at point of fracture, sometimes directly caused by leverage on pelvis. After a citation of cases and statistics of shortening Dr. C., exhibited his splint and set forth his claims in the following language.

"The presentation to the profession of a *General Lower Extremity Splint*, *entirely novel* in principle and in its arrangement, viz.:

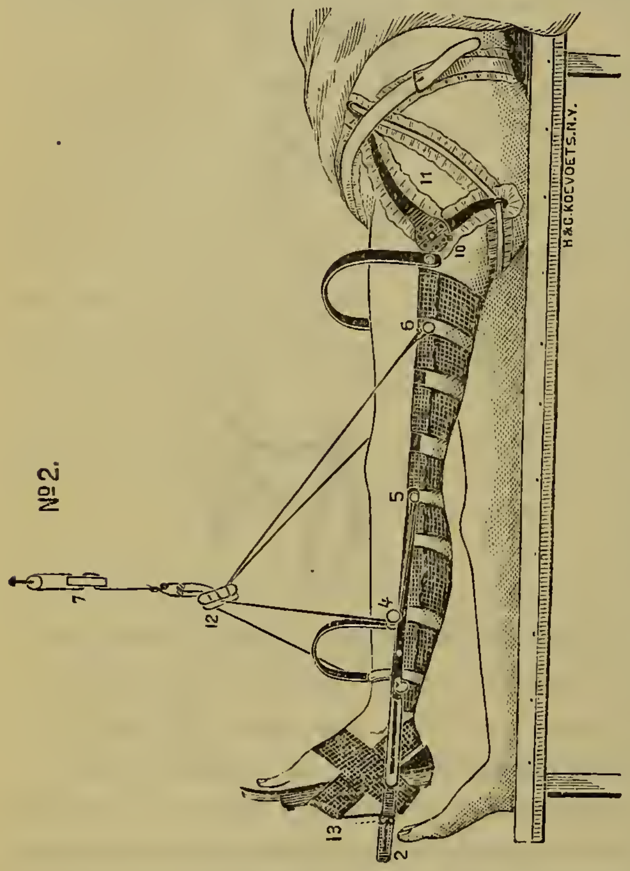
1st. In that when in suspension, it by weight of limb is capable of extension and counter extension. (The average weight of limb of adult is 20 pounds—which is the average weight used for extension—and the average weight of limb of child, is 1 pound per year—which also is the average weight used for extension.)

2nd. In that with the comforts of suspension it is capable—as required—of little or no extension or counter extension, but of *fixation* of hip-joint, knee or other section."

Description. The splint may be described as consisting of main frame, formed by two side pieces (of ½ inch by ⅛ inch iron) running from 2 to 10, plate No. 1, with two bowed cross braces as seen at 4 and just in front of 10, plate No. 1. From 2 to 4 in this main frame is on each side a slot, in which slide a cross rivet and a set screw, 8, plate No. 1, both connecting, with washers between, the *outside* pieces 3 to the *inside* or foot piece 1. (This slot is eight inches long, so the splint can be used for almost any adult limb). On the outside piece 3, at 5, is a knob for attachment of rope or cord, which passes forward and under pully 4, (which revolves upon a rivet in brace) and thence through block 12, back to knob 6, on main frame. At 12 the angle of suspension can be set as thought proper, and from 12 to ceiling or other attachment the degree of elevation is regulated by block 7, plate No 2.



Irons 9, plate No 1, are attachable by screw bolt at end of main frame and their angle, is regulated by pin in holes at 10. After setting of pin and tightening of set bolt, the horizontal position will be obligatory, but by the loosening of the same, as in tibia and fibular fractures with counter extending plasters from below knee, section 10 resolves itself into a mere hinge of even bearing, allowing a free and harmless set up by patient. The pieces forming triangle at hip joint section 11, Plate 2, are bent at angles to suit the flesh lines and are of different length and shape from those used on the inside which are twisted to show flat surface toward pubes and perineum, but these pieces can be used on either side, in order that the splint can be used for either limb. Particular attention is drawn to the fact that not only the hip joint, section 11, can be most comfortably *fixed* and controled, (the lack of which ability has often been realised in neck fractures, trochanteric impactions, etc.), but that by regulation of angle of rubber bearing from ends of 9, by set of pin at 10, the line of counter extension can effect in or eversion of limb, which in some of the shaft fractures is with proper elevation very desirable.


№2.

The peculiarities of the foot piece are that in addition to slot in outside iron and set screw at 13, plate 2, by which the foot may be raised or lowered, and limb in or everted; that by the, above and below rectangular slots such attachment and comfortable bearing can be had above heel and over instep as to make unnecessary the attachment of plasters, (which at any rate are comparatively useless in fractures of the lower third of tibia and fibula.)

Application. Whilst the limb is resting on mattress, 9, irons with rubber tubing bearing upon cushions (hair), are adjusted to the parts and abdominal band and cushion in connection applied; and in hip joint troubles, triangle 11, has been additionally fixed by a piece of felting or paste board moulded to section and saturated with starch, plaster or silicates, over which come the bearing of the irons and rubber. The bandages (which I used of hair cloth) are attached by pins to the one side of splint. The splint is next set over limb and the bandages, one by one drawn through and pinned to suit the limb lines, next the connection at 10 is made by the screw bolt, and the foot piece is slid up and hair bandage over stocking drawn out through slots and pinned. Set screw 8, is kept tight until angle of cords and of elevation has been, by blocks 12 and 7, arranged. It is then loosened and the weight of limb effects the extension by the carrying forward of foot piece and counter extension by back pressure of main frame at 10 on pelvic bearings. If the weight of limb is not sufficient, and no previous traction has been made, or in some cases of oblique fracture, extra pressure can for the moment be made upon splint and screw set at 8, or if the surgeon in any case be afraid of too much extension, he can at proper extension, effect *fixation* by tightening set screw 8, and can constantly compare measurement of limb.

The pelvic bearings in effecting counter extention are of self adjustment, do not gall, and by the open angles, circulation can not be interfered with. The pressure can be regulated by angle at 12 and by elevation or lowering of head of bedstead.

NOTE.—The first of these splints made by John Sweeny. Blacksmith of Fort Lee, at cost $2, was in suspension by tripod at meeting of New Jersey State Medical Society, 24th and 25th May, 1881, at Long Branch, and in its demonstration was commended by all. It has been examined and approved of by many practical surgeons among whom are Drs. F. H. Hamilton and Sayre, who if not agreeing upon other matters, both admit the perfections of this. One remark of Dr. Hamilton after regreting that he had not seen C's splint or a plate thereof in time for publication and commend, in his Sixth edition was that "for practical ingeniousness the *Southerner* (Dr. C.) had certainly this time beaten the Yankee, who was generally characterised as *the* inventor,"

LONDON HOSPITAL, ENGLAND. LEAD POISONING — CEREBRAL SYMPTOMS—DEATH. Reported by H. S. GABBETT, M.D.

REBECCA C., aged 22, married, a lead-worker, was admitted into the hospital on March 15th, 1881. She complained of severe pain in the abdomen and back, with restlessness and thirst. Her statements were somewhat incoherent, but it was elicited that she had always lived in London, and had enjoyed good health until two months before admission. She had been married for two years and a half, and had one child. There was some reason to believe that her habits had been intemperate, but no very positive evidence on this point was obtained. She had been employed at a white-lead factory for thee months, and had an attack of colic about two months before admission. The precise date of the commencement of her present illness could not be ascertained: but it appeared that she had been suffering for about four days. She stated that the first symptoms was great abdominal pain: that this continued and increased until she was obliged to take to her bed; that she lost her senses at one time and fell out of bed, and that convulsive movement of the head appeared on the day before admission.

On admission, the woman was well developed and well nourished; she lay heavily in bed, and seemed to dread being moved: her head was incessantly tossed to and fro, and the face twitched convulsively. She occasionally rambled in her talk, but gave fairly intelligent answers to questions. The temperature was 103° the pulse small and fast, the respirations hurried and shallow. There was a well-marked blue line on the gums; the tongue was tremulous and covered with white fur; she had no appetite for food, but complained much of thirst; she made frequent ineffectual attempts to vomit. The abdomen was excessively tender to the touch, but soft, and neither distended nor retracted. No sign of disease was found in the heart or lungs. She said she had pain in the elbow and knee joints; there was no redness, swelling, or effusion. There was much hyperæsthesia of the whole surface of the body.

On the next morning the temperature was 104°, and rose to 105° at 4 p.m. There was no marked change in her condition throughout the day; she vomited several times, and complained of pains all over, aggravated by movement or touch. She occasionally talked incoherently, but understood questions and answered rationally. The optic discs were normal. The urine contained a minute trace of albumen.

On the 17th, the patient's condition was worse; the tongue was dry and brown, she said she had much pain in the head, and complained of numbness of the arms; she often moaned, and was occasionally delirious. Dr. Sutton called attention to her manner, her extreme agitation in speaking, the tremulous twitching of the face, the hurried unrythmical action of the diaphragm, the extreme hyperæsthesia of the surface, and the patient's dread of being moved; and pointed out that these symptoms denoted disease of the cerebro-spinal centres. He also remarked that there was no sign of peritonitis, pneumonia, pericarditis, endocarditis, or nephritis: so that by a process of exclusion the observer was led to think of disease in the brain and cord. With regard to the nature of that disease, he directed attention to the marked blue line upon the gums, and related cases of lead poisoning with prominent cerebral symptoms, where no meningitis or other coarse change had been found after death. Throughout the day the patient's temperature remained at about 104°. She was pretty quiet and slept a little in the night.

On March 18th and 19th, there was no material change in her condition, except that she was obviously becoming more exhausted. She was still slightly delirious, and rather slower of comprehension. The twitching and tremor continued, but were less marked. She vomited frequently, curdled milk with bile. The temperature (taken every two hours) was usually 104°; and on two occasions alone sank to 103°. The tongue was dry and brown, and sordes appeared on the teeth.

On March the 20th, she was evidently sinking rapidly; she lay on her back taking no notice of anyone; breathing fast and shallow; very little twitching of the face was noticeable; she occasionally muttered something unintelligible, and picked at the bed clothes. She died in the evening, the temperature taken shortly before death being 105°.

At the *post mortem* examination, no change was found in the thorax or abdomen: beyond venous congestion, all the organs appeared to be healthy. The brain and cord were minutely examined; no trace of meningitis was seen, there was distinct flattening of the cerebral convolutions, but no excess of fluid in the ventricles, and no naked-eye appearances of any disease. —*British Medical Journal.*

The Sanitary Council of the Mississippi Valley.

The Council met at Evansville, Indiana, in the third week of April. A committee of eleven members, Dr. J. D. Plunkett, of Tennessee, Chairman, was appointed to submit propositions covering the work of the Council. They reported April 21. They spoke in favor of representatives of the National Board of Health residing at quarantine stations on the Mississippi river, and also one at New Orleans, with the privilege of searching the records of the State Boards of Health and attending their meetings. The difficulty with the Louisiana State Board of Health was deplored, and the action of the State Board condemned. The following resolutions were adopted :—

Resolved, That the inspection service of river and rail transportation by the National Board of Health is hereby desired, and its reëstablishment for the ensuing season is urged, on behalf of representatives in this Council; that certificates and bills of health issued by said inspection service shall be accepted as *prima facie* evidence of the sanitary state of vessels and trains presenting the same.

Resolved, That this council being firmly convinced that the safety of New Orleans, as well as the valley, lies in the rigid exclusion of infected ships from the Lower Mississippi, strenuously urge upon the State Board of Louisiana, a modification of section 6, of the rules and regulations for the government of quarantine officers and stations, etc., so as to read: Section 6. All vessels from ports at which yellow fever is prevailing, or from ports where contagious or infectious diseases are reported to exist, shall be inspected at Eadsport. If any such are found to be infected, or to furnish reasonable ground for suspicions of infection, such vessels shall not be allowed to pass Eadsport, northwise, except upon the presentation of a certificate from the Inspector of the National Board of Health, at Ship Island Quarantine Station, setting forth that the vessel has been subjected to proper treatment and is free from the liability of conveying the contagion.

Resolved, That in the judgment of this Council the quarantine of vessels and freight should consist of purification of the vessel and its contents, which should then be returned to commerce as speedily as practicable.

3. The means of informing the Board of Health in the Valley of apprehended danger.

Resolved, That this Council condemns all methods of suppression and secrecy with reference to information of contagious or infectious diseases; therefore discountenances the use of cipher telegrams; but in the event of danger from such diseases at any point in the Mississippi Valley, it is the duty of the executive officer of the health organization of such place to fully and promptly advise the proper authorities at all threatened points.

Dr. J. J. Speed, of Louisville, was elected President, and Dr. Johnson, of Mississippi, Vice President, for the ensuing year.

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CORRESPONDENCE.

"Sit mihi fas scribere audita."

JEFFERSON, TEXAS,
May, 1881.

Dr. Gaillard:

Dear Sir:—I have just read in the *Clinical News* of Philadelphia, (Feb. 5, 1881), a notice of an operation for abscess of the lung, by Dr. Fenger; in in which it is stated that it is the first operation of the kind where the patient recovered, that is on record.

If you will allow me space in your valuable JOURNAL, I will give you the following case, which I take from my note book.

On the fifth day of June, 1858, I was called to see a child of one of my patrons, Mr. J. H. W., a citizen of this town, to see his little girl of eight years of age, of delicate frame, and nervous constitution. Had been complaining and was under domestic treatment for fifteen days.

After a very careful examination, I diagnosed the case as one of abscess of the upper lobe of the left lung. I placed the patient under treatment, giving at the same time an unfavorable diagnosis, and saying that at best it would be a long and troublesome case. In about three weeks, the parents and friends became anxious, and under promises of speedy cure by a Hydropathist, who had many friends, the case was placed under his treatment. This was continued for ten or twelve days, without benefit. Then it went under the treatment of another physician, for eight or ten days, with the same result.

The parents finding no relief from the changes began to despair of the child's recovery and pressed me to take charge of the case again. So on the second day of August I took charge of the case, and placed the patient under treatment.

Being satisfied that my first diagnosis was correct, and that the time for an operation had arrived, I informed the parents of the fact, and they positively refused to allow me to make the operation. I continued to watch the little sufferer, keeping her under constitutional and anodyne treatment, and begged for the privilege of operating.

On the nineteenth day of October, I gained permission and proceeded to operate. The patient being placed under chloroform, I made an incision about two inches long, commencing ¾ of an inch from the sternum on the left side, between the second and third ribs; and finding the pleural adhesions very great I carefully cut through them into the lung, where I found a cavity containing about four ounces of pus, which I at once removed.

After cleansing the cavity, I mopped it all out with a weak solution of creasote Dressed the wound with a tent in the opening, and continued the general and supporting treatment for seven months. The cavity in the lung was then filled up when I removed the tent, and in thirty or forty days the wound healed, and the case discharged.

I will mention, however, that the left side did not expand equally with the right which caused some deformity.

The patient's health remained good and she became a beautiful woman. In 1869 she married, and is now the mother of several children. I omit details of symptoms, and treatment as this letter is already too long.

S. G. Eason, M. D.

Bremen, Texas,
May 9th, 1881.

Dr. E. S. Gaillard:

Dear Doctor:—Having had several cases of Epilepsy to treat, one of which was in my own family, I have sought information from every source possible for me to obtain, and have used my own medical ideas in such a manner that I hope I may be of some benefit to a portion of humanity that are subject to this dreadful disease. I have been successful with the following, when everything else failed. I hope that the Profession will give it a fair trial and give their report of same. I have cured cases when they did not take the medicine more than three months (without any return of the Epilepsy.)

Potassi brom., . .	4 oz.
Ammon. brom., . .	1 oz.
Fluid Ext. Valerian, fluid ext. Cimicifuga, each, .	½ oz.
Aqua Pura, . . .	32 oz.

M. S. Tablespoonful three times a day before meals, giving at the same time Tinct. Digitalis in ½ to 1 drachm doses, according to urgency of case. I insist upon a careful observance of hygienic rules.

I have other subjects and reports of cases that I may report. If you think this of any special importance you can publish it; if not, you can have it tried in the hospitals and report result to me.

Yours truly,
I. M. Foy, M.D.

Scottsboro, Ala.,
May 24th. 1881.

E. S. Gaillard, M.D.,

Dear Doctor:—If you think the following worth publishing it is at your disposal. On the morning of the 19th, I was called to see a woman of the town, who had taken twenty-four (24) grains of Sul. Morphia, with suicidal intent, about three hours before I saw her. I at once gave her by Hypodermic injection one-fifth (⅕) of a grain atropine, together with the usual physical means. It completely relieved her. She had some imperfect vision for a few hours, but is now in her usual health and says she has no inclination to make another attempt upon her life. I am pleased with the JOURNAL and wish you abundant success.

Yours, &c,.
A. G. CLOPTON, M. D.

FLATONIA, TEXAS,
April 26th, 1881.

Dear Doctor :—As so few physicians use Smith's anterior splint for fractures of the lower extremity, and as it has proved in my hands the simplest method of treating such injuries and with better results than by any other method, I will give you a short sketch of one case and its results. My friend, Dr. R. B. Thomas, of this place, had his left femur fractured in three places ; the fibula was fractured once, about three inches below the knee. The shock was great. For several days we despaired of his recovery. The Doctor was fifty years old and in feeble health. On learning the extent of his injuries, he begged me not to apply any splint, as it would be impossible for him to recover, and, as he had lain once for eight or ten weeks in a fracture box, he knew what he must suffer, and would rather die. With difficulty he was persuaded to submit to the application of an anterior splint. The first few days the Doctor was delirious and we hardly thought he would recover. After that time he did well. At no time was there any complaint of discomfort from the splint, but on the contrary, he often expressed his gratification at being able to sit up partially and to have the limb raised or lowered as was most pleasant to him at the time. The Doctor was injured on the 27th of December, 1877. On the 4th of May following, he was able to walk with a stick and was attending to his practice in great measure. The shortening of the limb is about ¾ of an inch. I leave space for the Doctor to add a postscript.

Yours respectfully,
H. A. TUTWILER.

I have the best limb in the States.

Yours respectfully,
R. B. THOMAS.

NEW YORK, *June 6th*, 1881.

DR. E. S. GAILLARD :

Sir :—The relation of animal and human diseases is now a subject of great attention in Europe as well as this country, in searching for a preventive against infectious diseases. I give here briefly the results of treating and preventing certain diseases by vaccination.

It has long been shown that a similarity of diseases exists between the animal or bovine, and that of the human family ; that they are nearly identical. There is at least a very close correspondence in many particulars, and practically so has this proved in the application and discovery of vaccination in preventing small pox. It is now well known and has been determined that all virulent poisons, and contagious fluids of zymotic and infectious diseases, when *diffused*, or *passed* through an *animal membrane* lose their contagious or poisonous property, while the portion which does not pass through still *retains it*, and may then be used as the antidote, or *specific remedy*, with harmlessness and without danger, while the primitive virus, or liquid, retains all its impure properties, and is without effect.

These results are the same in vaccination for Small Pox, Pleuro Pneumonia of the Bovine and the Aphthous Hoof and Mouth disease, which corresponds with Scarlet Fever in the human subject. If a preventive has been discovered that contains within itself a means that is *simple* and *harmless* in its effects, which under definite conditions can be used, that will give immunity or lessen the severity of a disease that is contagious or not contagious, and applied as in vaccination, and this is proven by the number of cases treated, it will be of inestimable value to mankind, and a discovery only second in value to that of the effectiveness of vaccination in Small Pox. It is now well understood that the influence of one poison has the power of neutralizing and destroying the action of another, and this is proven in vaccination for Small Pox, and the Negro or Cholo in Mexico who inoculates himself with the poison of the serpent, with the tooth of a rattlesnake, renders himself safe from the bite of all venemous animals.

In an editorial article of the *Journal of Comparative Medicine and Surgery*, April, 1881, on the investigation of contagious diseases among domestic animals we find the following remark: "For if a modified virus can be obtained that will produce the disease in a less intense form, which will not effect the general health of the animal, and yet grant him immunity from a second attack, we shall have made a discovery that will rank with that of vaccination."

During the last few years many facts have been discovered concerning the identity of infections of the animal and human diseases, such Anthrax, Hydrophobia, Aphthous Hoof and Mouth disease, Trichinæ, &c. But it was demonstrated that Tuberculosis or Phthisis in general can be conveyed from the lower animals to man through the flesh and milk of the former, and facts were published which answer the question in the affirmative.

In the last few years, during the year 1880, Comparative Pathology has been studied with new and all absorbing interest with a view to this direction.

In France, it was above all, *Pasteur*, who studied the etiology of certain animal diseases and who received a large sum of money from his government for the purpose of continuing his experiments, and largely interested is the government of the United States in this subject, as learned from the reports of Prof. Law on contagious diseases among domestic animals. In the French Journal of the Academy of Medicine and Surgery, No. 34, 1880, *Toursaint* and *Chauveau* report their experiments of inoculating animals with the blood which they had taken from animals just dead from Anthrax disease. They first used defibrinated and filtered blood which they had exposed for ten minutes to 55° C. They claim that animals inoculated with this fluid, viz., those twice inoculated showed complete immunity from the fluid of anthrax poison. It was also proven by *Toursaint* and *Chauveau*, selecting septicæmic virus, and exposing it to a temperature 55° C. for ten minutes and then used for inoculating. These experimenters claim, as the result, that animals thus inoculated were rendered insusceptible to any further inoculation, with fresh septic matter, though these last experiments were but very imperfect, and the *results obtained unreliable from the manner* in which they *treated their virus*, to *inoculate* with an *impracticable one.*

Still we learn from these experiments, and in fact from all parts of the civilized world, the confirmation of the fact that a modified infection, like that in vaccination, will secure at least a certain degree of immunity against some infectious diseases.

Every day brings us new discoveries in this direction and great expectations are entertained of the final result, from all the researches made in this direction.

Truly yours,
WESLEY MILLER,
687 Broadway, N. Y.

MEDICAL CONFESSIONAL.

Peccavi.

PULASKI, TEXAS,
June, 1881.

Dear Sir :—I am glad to see that the Confessional department is so well supported and that there are so many physicians who have the courage for the good of humanity and for the benefit of the profession to place on public record their errors in practice. Every physician has made many mistakes, if he has had any practice, and it is strange that there are yet so many so cowardly as to desire to have their errors buried forever.

I have made my share of mistakes and among the number give the report of one which may be of use to my brethren.

I was called in the summer of the past year to see a patient who had had for several years chronic syphilis. He had copper colored spots upon the skin, nodes, sufraorbital head-ache, disturbed intellection, with tinnitus aurium, disturbed sleep and a very bad cough with progressive emaciation. He had been so hopeless in regard to the syphllis that he had ceased to take medicine for it, and his real purpose in consulting me was to obtain relief for his cough. Physicians regarded this as due to "consumption" and gave him neither comfort nor relief.

On examining him I found some subclavicular dullness, moist bronchial râles, but no evidences of cavity. There was no fever at night, his appetite was fair under the circumstances, and I did not believe there was reason to regard the case as one of consumption; there certainly were no evidences of tubercular disease or of catarrah or of fibroid phthisis. Remembering a most interesting case reported in your JOURNAL by Dr. Joseph Thompson, of Paducah, Ky., I was led to believe that the lung trouble, like that of the skin and the bones was due to the same cause, syphilis. Acting under this conviction I gave him lemon syrup with a sufficient amount of paregoric to allay cough and put him at once under the influences of large doses of iodide of potassium; beginning with ten grains in water three times a day and increasing the quantity one grain to each dose daily (30 grains the first day, 33 the second day, 36 the third and so on) until he was taking 25 grains at each dose. I then omitted the medicine for a few days, and next resumed it as before, avoiding thus completely all of the toxic effects of the drug. This course of treatment was continued for one month, at the end of which there was marked improvement in all of the symptoms, but most of all in the cough. The patient was easily induced to continue this treatment for several months, and he is at the present time, so far as I can judge, entirely restored.

All who had examined this case believed it to be a hopeless one; I also thought so, and said so to the patient, though I was not satisfied in regard to my diagnosis. Had I not read the remarkable case published by Dr. Thompson, showing the errors of all who had treated his patient, I am sure that I would not only have discouraged the patient more than I did, but that I would never have selected the mode of treatment pursued.

It is very evident that the publication of ones own errors, and the errors of others, (names being concealed) is one of the most valuable of all aids to the Profession. If we could or rather would publish our errors, confessing them without reserve, our brethren would learn more by such a course, than by the study of all possible reports of successful cases only.

I am very thankful that you have opened this Confessional department, and am sure that those who write for it will not only do the Profession good, but themselves also; for if there is anything more than another, calculated to improve a man, and make him feel like a man, it is the confession of his errors, and the consciousness that he has had the moral courage to do so.

Truly yours,

R. W. JOHNSON.

REVIEWS.

"Judex damnatur cum nocens absolvitur."

HYDROPHOBIA. By Horatio R. Bigelow, M.D., Member of the Medical Association and Licentiate of the Medical Society of the District of Columbia. Philadelphia. D. G. Brinton, 115 South Seventh St. 1881.

This work is an excellent compilation of the best books and papers which have appeared on this interesting subject. Indeed there is very little of either interest or importance in the literature now before the Profession which the author has not carefully studied and conscientiously presented. But when this is said all has been said which can be justly stated; though this is amply sufficient to induce a large demand for the book; as every physician is anxious to read what is most interesting and valuable in this connection. It is proper to add that, so far as is known, this is the only treatise on the subject which has appeared in this country; though there are, of course, many articles in medical journals and a few monographs which have obtained an extensive circulation ; and in many text books and works on nervous diseases, their respective authors have contributed excellent chapters.

The author states that his work has been prepared after having had at his command over *three thousand monographs, treatises and articles* in that valuable repertory, the Army Medical Museum at Washington ; and in addition to this such other material as he has been able to obtain. Such facts known to the readers of this Journal cannot but give them additional reasons for wishing to obtain this volume.

As to the name hydrophobia, the author has manifested good judgment in using it, in preference to the term Rabies, incorrectly used by many ; this latter word being now applied by the best writers to designate the same disease as it appears in the lower animals ; the word hydrophobia being reserved to designate the disease as it is seen in man. Of course every one knows that, etymologically considered, the word hydrophobia (the fear of water) is incorrect, as in animals there is a great desire for water, while in man the fear of water experienced is not on account of its appearance, but from a dread of the spasms which the sight of water induces But the word hydrophobia is as old as the days of Galen, and so long as there is an absolute ignorance as to the pathology and morbid anatomy of the disease, it is better to use a word which is best known and which time and usage have sanctioned.

In examining into the history of the malady, hydrophobia, the author has been able to trace it as far back as the period of the ninth century, B. C., when it is described in a Hindoo medical work, by Susruta, a renowned physician of that remote era. The Hebrew writers are strangely silent in regard to it.

It seems that since the publication of Bœrhave's Aphorisms, very little, if anything (reliable), has been added to the Professional knowledge of the morbid anatomy and pathology of this obscure disease. There is profound congestion of the organs of deglutition, of the lungs, and bronchi, with full arteries, distended heart and collapsed veins ; the muscles, brain, medulla, spinal cord, and viscera being conspicuously anæmic. This seems to be the amount of the record. It is true that Shinkwin of Dublin, Trolliet of France, Kolesem Koff of Russia, Clifford Allbutt of England and W. A. Hammond of America, (the McCormick case) have published reports of lesions of the nervous centres (granular and fatty degeneration, etc.,) but there is nothing in the record, so far, to show whether such lesions are primary or secondary; while Bruckmüller, after discecting 375 dogs, has shown that these nerve changes or lesions are oftenest absent and that they occur in other diseases. It may safely be said then that there are no pathognomonic manifestations or lesions in this disease. It is not even known whether the blood is affected primarily and the nerve and other tissues are implicated secondarily, or whether the reverse of this is the case. The theory of Dr. Bigelow (the author), that a blood ferment is the exciting factor, inhibiting the functions of the red corpuscles, and changing their chemical, physical and physiological properties, etc,, is all pure theory ; " as baseless as the fabric of a vision." The practice founded on it, is of course fanciful and speculative.

The etiology of the disease is absolutely as unknown as it was in the days of Galen.

The period of incubation varies from three days to fourteen years ; that is to say nothing reliable is know in regard to it. The disease, however, in most cases makes it appearance in sixty days, and, taking a common sense view of the matter, it may be assumed, with reasonable accuracy, tha if there are no symptoms in that time, there will be an entire escape.

Very many who are bitten escape, of course, from the fact that the virus is removed by the clothing. In one series of tables, given by the French, there were in 330 cases of persons bitten, only 129 who had the disease. An important fact.

Age seems to exercise some influence, as most cases (97 : 144) occur in those between the ages of 5 and 15. Of course, due allowance must be made for the natural ignorance, carelessness, and rashness of children of that age.

Sex also exercises influence. In 322 cases in one report, 206 were males. Of course they are most exposed. Season seems to have little if any effect. There are most cases in Spring, and least in Autumn. The extremely hot weather of Summer, in the so called " dog-days," does not exercise the influence supposed; while in Russia the largest number of cases occur when the entire country is frozen. The muzzling of dogs in Summer is a relic of the dark ages: and the act is not only unscientific and without reason, but is cruel and silly in the extreme. The muzzle even increases the liability to the disease.

Prognosis.—It is denied by many that well developed cases ever recover. This, however, is a ruling too absolute. Offenburg and Dr. Austin Flint have each reported a case of recovery; doubtless others have done so.

As to the diagnosis and symptoms the author offers nothing new. The disease is readily recognized.

In regard to treatment, reliance is to be chiefly placed upon suction; wet-cupping with scarification; cauterization; caustics; the ligature; opium; chloral; chloroform; curare; Jaborandi or Pilo-carpin; oxygen, etc., etc.

The mad-stone, the favorite remedy of men in petticoats, and women in pantaloons, of superstitious imbeciles, and speculative traders, of some doctors who should be ashamed of themselves, and of some of the illiterate clergy who do not realize that the days of charms, of abracadabra and of incantations belong to the dark ages, is not even mentioned by the author.

This interesting work has been noticed with some care, that the reader may appreciate its real value and add it without delay to his library.

THE PRINCIPLES AND PRACTICE OF SURGERY. BEING A TREATISE ON SURGICAL DISEASES AND INJURIES. By D. HAYES AGNEW, M.D., LL.D., Professor of Surgery in the Medical Department of the University of Pennsylvania. Vol. II. J. B. Lippincott & Co., Philadelphia and London. 1881.

We have waited for some time for the appearance of this volume the second of Prof. Agnew's great work. Its publication has for some reason been delayed and we find from the preface that it does not complete the work as was announced in the first volume, but that a third will be necessary. This is as it should be. It would have been impossible to compress within the limits of one volume the details of the subjects left after the issue of the first. The work is evidently intended to be a complete encyclopædia of surgery and will treat in detail of subjects not usually dwelt upon in surgical text books. Some subjects generally left to specialists are treated of at length in the present volume, as for instance, the surgical diseases of women, and of the teeth. Possibly in the third volume the author will take up the subject of the eye and other diseases generally left to specialists. It is better for every one, both patient and physician, that such should be the case, as these eye, ear and nose troubles are the bane of the profession and no man can expect to attain even a moderate degree of success as a specialist unless he is well grounded in the principles of medicine and surgery. The opinion of an eminent and successful surgeon upon such subjects will be of great value and such an opinion will be found in the present work. Not that every opinion of Dr. Agnew is to be blindly followed. He is an authority but not an infallible authority. Dr. Agnew himself seems to follow the opinions of certain authors upon various subjects and adopting their views to the fullest extent, enunciates them as if there was no appeal from such authority. He begins this volume with dislocations and a capital treatise upon dislocations it is. Indeed the author evidently intended to make of his chapters upon fractures in the first volume and dislocations in the second volume a complete treatise upon fractures and dislocations. They would make an excellent work if published separately. In speaking of dislocations of the shoulder, Professor Agnew says that he believes the coraco-humeral part of the capsular ligament remains untorn and that it performs an important office in conducting the head of the bone into the glenoid cavity during properly applied efforts at reduction. He undoubtedly got this idea from Prof. Bigelow's account of the part played by the ilio-femoral ligament in hip-joint dislocations. Of the hip-joint dislocations he makes three varieties instead of the old and proper classification into four, although Dr. Agnew himself states that the symptoms of the sciatic dislocation are quite characteristic and that those developed by the alternate tension and relaxation of the psoas magnus and iliacus internus muscles first noticed by Mr. Syme do not exist in any other injury or disease of the hip-joint. He omits altogether the diagnostic sign first brought permanently before the profession by Prof. Dawson. He must also know that the relation of the head of the bone to the tendon of the obturator internus muscle mentioned by Bigelow as differentiating this dislocation does not exist. He describes the method of reduction by manipulation, but also gives an account of the old pulley system which has now gone out of use. His account of joint diseases is excellent and is well worthy of study, Dr. Agnew is by no means a follower of Dr. Sayre in his views upon the cause of hip-joint disease. He does not believe in the local origin of the disease; on the contrary he says it originates in a state of the general system which may be termed tubercular or strumous. The chapters upon minor surgery and operations are excellent. In the chapter upon anæsthetics Dr. Agnew after describing the effects of ether and chloroform and stating that the last is the most dangerous, says that chloroform, except in the few cases where ether fails to produce decided anæsthesia, should be banished from surgical practice. The person who edited Bryant's Surgery in this country makes even a stranger declaration, and considers it criminal, defiling thus the work of such a surgeon as Mr. Bryant, although that eminent man recommends chloroform and was one of the committee appointed by the British government to investigate the subject of anæsthetics. No man has a right in the present state of medical knowledge to make such statements. They might be brought up in court and used by pettifoggers to induce a pig-headed jury to do incalculable harm to an innocent man. Dr. Agnew and his friends must know that chloroform is used habitually by the majority of the surgeons of this country and of Europe, men in every way as well qualified as Dr. Agnew himself to judge of matters affecting the life and health of a human being. Dr. Agnew states that the use of anæsthetics was discovered by Morton and Wells in 1844, and animadverts upon an ungrateful nation in not erecting an enduring monument to the two humble dentists who conferred this great boon upon humanity. Now it is conclusively proved that Dr. Long of Georgia was the discoverer of anæsthesia by means of ether, and does not Dr. Agnew think it a still greater crime to attempt to deprive a brother physician of his well-earned fame than to build a monument to men who do not merit the claim made for them? In his chapter on amputations Dr. Agnew states that the circular operation has been abandoned and that the flat is exclusively performed. It is well known however that the circular and the modifications of the circular are the operations most frequently performed by modern surgeons, the flat being displaced from the prominent position given to it by Mr. Lister. Dr. Agnew is an advocate for the antiseptic system of dressing wounds in all of its details, and seems to be a believer in the antiseptic theory. Yet he does not always recommend that system so pointedly as one would suppose in describing the various operations, and in speaking of traumatic infective fever he says that previous to the introduction of forced ventilation by means of the fan, into the Pennsylvania Hospital, traumatic infection was very common. Since the adoption of forced ventilation not a single case has occurred. The success of the antiseptic system is probably due to this thorough ventilation as well as to the cleanliness which is enforced in regard to the instruments, the dressing, and the *personnel* of both physician and attendants. The success of Mr. Lister himself, which seems to be greater than that of his followers, must be largely due to the personal qualities of that great surgeon. The chapter upon the injuries and diseases of the genito-urinary organs is an excellent one. It is a very full treatise upon the subject, and although one might dissent from some of its teachings, it is probably one of the best treatises upon the subject now before the profession. Dr. Agnew condemns in pointed terms, but not too pointedly, the brutal and dangerous practice of divulsion with a Holt's or any other dilator, in stricture of the urethra. He should also have stated that internal urethrotomy is sometimes fatal, but few surgeons have had Dr. Mastin's uninterrupted success. The chapter on the surgical diseases of women is very full and complete, and could hardly be improved upon. Many of the operations are given minutely, and even a history of the operation is generally prefixed. In the history of the operation for vesico-vaginal fistula Dr. Agnew omits to mention the name of Dr. Bozeman, who is certainly entitled to as much credit for bringing the modern method into notice as any other surgeon, with the possible exception of Dr. Sims There can be no doubt that these numerous operations upon women as performed by Dr. Agnew and men like him, are done to the better advantage of women, but in no other department of surgery is there so much brutality and ignorance manifested by would-be surgeons as in this. A proper study of this work might to a certain extent arouse this class of persons and cure them of the operative mania described by Verneuil as criminal. The two chapters upon surgical diseases of the mouth and of the spinal region conclude the book. Dr. Agnew's Surgery is a work which cannot be be read by anyone without benefit. It deserves to be closely studied by every surgeon, and should be in the library of every physician. It is not a book adapted to the use of medical students, nor is it a work marked by strong individuality. It will never supersede such a book as Bryant or Erichsen as a textbook for the student, but will be invaluable as a book of reference. The publishers have done their part of the task in a creditable manner.

E. M., Louisville, Ky.

A TREATISE ON BRIGHT'S DISEASE AND DIABETES WITH ESPECIAL REFERENCE TO PATHOLOGY AND THERAPEUTICS. By JAMES A. TYSON, M.D., Professor of General Pathology in the University of Pennsylvania, etc. With Illustrations. Also a Section on Retinitis in Bright's Disease. By W. F. NORRIS, A.M., M.D., Professor of Ophthalmology in the University of Pennsylvania. Philadelphia. Lindsay & Blakiston. 1881.

Though many of the hyper-critical would say, that as Bright's disease is a disease of the kidneys, while diabetes is not a disease of these organs, they should not be thus allied in the same volume, it must be admitted by all that diabetes, if not primarily a disease of the kidneys, organically implicates these organs, necessitating a study of the urine, and coming thus in the special field of renal disorders. The author therefore while conjoining an organic disease with one primarily constitutional and secondarily organic is not really guilty of the pathological solecism or inconsistency which is suggested by an examination of the title only of his work. It is just to say that no one has more thoroughly than himself appreciated these objections and facts.

As to the work itself, there can be no question of the fact that it is the equal of any before the profession, and that in many respects, viz., its simplicity of arrangement, lucidity of description, pathological accuracy, excellence of illustration, and careful diction, it is superior to them all.

In the important matter of classification of Bright's disease, the author while giving the views of Frerichs, Reinhardt, Traube, Bamberger, Virchow, Klebs, Rosenstein, George Johnson, Roberts, Grainger Stewart, Dickinson, with those of Lancereaux, Cornil and Ranvier, of Lecorché and other specialists whose names are familiar to the modern student, adopts a classification which, for simplicity and comprehensiveness, will be found generally acceptable and popular. He divides the disease into the acute and chronic.

Acute Bright's is limited to a single pathological condition, viz., acute parenchymatous nephritis; while in chronic Bright's disease, the following pathological conditions are regarded as distinct and separate, viz., chronic parenchymatous nephritis, lardaceous disease,and interstitial nephritis.

The diagnostic symptoms recognised or accepted by the author are albuminuria and dropsy, with tube casts ; a symptomatology familiar to all and generally accepted. The treatment advised is not especially different from that usually adopted. The author very wisely regards dieting as the chief means of treating diabetes. The diet advised is too well known to require mention. Hygiene is of course considered as a very important factor, and a close conformity to the best hygienic rules the author regards very naturally as highly important. Medicinal treatment is carefully considered and is, it appears, regarded as of more value, than experience entirely justifies. Ergot is regarded as of especial value; yet in a disease, ameliorable, but generally incurable (in its chronic and distinctly organic form) the use of this poison to the stomach, it must be admitted, even by the author, is certainly very objectionable and of transitory advisability. The alkaline treatment of Mialhe is commended and so is the lactic acid method of Cantani. Glycerin, being convertible into sugar, is wisely repudiated as a substitute, though accepted as useful and not so injurious. Opium and morphia are, it is believed, unwisely commended, while undue importance is given to cod liver oil, strychnia, iodide of potassium, etc. The use of the syrup of the phosphites, so necessary in the prolonged consumption of gluten bread, is given due importance.

If the author insisted even more strongly on the dietetic treatment, and less on the medicinal, his views would be regarded as more thoroughly justified by the best experience.

As to the pathology and etiology of diabetes insipidus, the author has nothing new to offer. The same old cloud of darkness and obscurity rests over it all. The prognosis given by him seems to be not quite accurate, from the fact that the great majority of cases are due to poverty of blood; these are almost all curable. In the army, polyuria, during the late war, was very common indeed and was easily cured by proper treatment; the polyuria of the battlefield excepted.

The engravings,cuts,chromo-lithographs, etc., are unusually good, and the work is excellently issued. It is heartily recommended.

MR. PERKINS' DAUGHTER. By the MARCHIONESS CLARA LANZA. New York. G. P. Putnam's Sons. 29 West 23d Street, N. Y.

It is an open secret that the Marchioness Clara Lanza is the daughter of Dr. W. A. Hammond, of New York. Her book seems to have been written with the view of introducing into the literature of fiction the novel manifestations characteristic of amnesia, and of what her father has termed syggignosticism; and while this is exceedingly well done, the authoress has embraced the opportunity of indulging in most of the pleasures so remunerative and enjoyable to the readers of fiction. In these latter manifestations, she has been particularly happy and successful. Her descriptive, dialogue, humor, reasoning, and analytical acumen are conspicuously good; while her "knowledge of the world" and of human nature is extraordinary.

The hypercritical might object that amnesia and syggignosticism (or rather sygnosticism) as depicted by her is most rarely manifested; that "her case," clinically and romantically, well presented, is exceptional, and not typical in character; but it must be remembered that her object was to make a decided impression on her class of readers, and that something, indeed a great deal, should be accorded to the license of fiction.

It is to be regretted that "Mr. Perkins' Daughter" should have been selected as a fair type of the best American women; a type regarded as so just and excellent, as to constitute its representative a heroine. The want of refinement, the conspicuous vanity, the false pride, the faulty and inelegant diction, the unfilial conduct, etc., of the heroine cannot fairly be accepted as the actual characteristics of a typical American girl; and while this will be recognized and excused here, it may give to readers abroad a very unfair conception of the best young women of this country. It is also to be regretted that the authoress did not select and present, as her heroine, the highest type of the well born, well educated, socially accomplished and thoroughly refined American woman. The travesty upon the best American women is so common and so universal in European works, that they really deserve a fair and true representation at home.

It would be unjust to the authoress to offer no criticisms on her work, for it is too good not to be criticised, yet while these criticisms are presented, the opportunity is, at the same time, embraced for complimenting her on the unusual strength and conspicuous merit of her production. Physicians will enjoy it exceedingly and they are advised to lose no time in procuring it.

Shortening of Limbs after Fracture.

By Lewis A. Sayre, M.D., N. Y.

It will be remembered that, in a report made by Dr. Sayre to the American Medical Association, at its meeting in Detroit, 1874, he claimed an admission on the part of Prof. F. H. Hamilton that fractures of the leg might and did unite without shortening; that Dr. Hamilton had measured the legs of cases of fracture at Bellevue and admitted there was union without shortening, this admission being made to some of the staff. In his work on Fractures Dr. Hamilton denies the allegations made and accuses Dr. Sayre of falsehood.

In this pamphlet, Dr. Sayre recapitulates the facts, and publishes letters from the old Bellevue staff, showing that the measurements were made by Dr. Hamilton before the staff; and by the staff in his presence, and that he made the admissions alleged.

Dr. Sayre sustains his positions and assertions very clearly, but it is unfortunate that this controversy ever arose, and it is to be hoped that this will be the end of it. *Cui bono?*

Newspaper Reviews of Medical Books.

There are many medical authors now who, in direct antagonism with the teaching of the Code of Ethics, and in violation of the laws of good taste and propriety, send their works to the newspaper press for notice or review. It is of course assumed that the review corps of a newspaper knowing nothing whatever of the subjects under review, will, as a result, indulge in profitable praise and useful eulogy, and that such notices will bring such authors before the people to the advantage of themselves pecuniarily, if to their ruin professionally. But it sometimes happens that the newspaper reviewers are not as "big fools" as they are supposed to be;

that they use gall sometimes instead of honey for ink, and that the scalpel can be can be very amusingly substituted for the pencil or the pen.

Two of the physicians of this city have just received the following reviews of their works in the *New York Herald.* The reviewer abstains from giving even the address of either author, and refuses to offer a single word of either compliment or praise.

"Dr. H. H. Kane's 'Drugs that Enslave' groups under this head several medicines which, first given perhaps by physicians in the treatment of disease, are subsequently taken by the patients with the intention of relieving the same symptoms for which they were prescribed, and thus taken until their use becomes a 'habit' of the system and the victim finds himself unable to live without them. These are opium and its derivatives—chloral and haschisch, or Indian hemp (cannabis Indica). It is a good treatise on a subject of professional and general interest; yet it seems rather superfluous to so elaborately warn a learned profession of the possible results of the use of medicines which it ought to be presumed are never used without sufficient reason and in view of all the consequences. 'Habits' thus formed are indeed not to be viewed in the grievous light in which they must appear if we contrast the victim of them with the healthy, buoyant, robust people without any evil habits, but rather they are to be judged by contrasting the victim with a dead man. They are a consequence of a compromise with death. They are given to keep the man alive in the first place, and did it; and they are taken continuously for the same purpose. Their victim becomes a morbid specimen of humanity; but if he prefers that to being buried, we cannot say but that, from his point of view, he is right."

"Dr. Beard's 'Treatise on Seasickness' appears again in a fourth edition, and to have sold 4,000 copies of such a contribution to knowledge is a reasonable success. Inasmuch as we have not lately heard of a great increase in the number of deaths on ocean voyages *we may infer that all these volumes have not been bought by people who went to sea.* As the treatise is presented in a popular form it is, perhaps, intended for the people and not for the profession; yet it recommends the use of atropia, cannabis indica, hydrate of chloral and several preparations of bromine, *drugs which in the hands of the unskilful are certainly more to be feared than seasickness.*"

CATALOGUE OF THE WOOD MUSEUM OF BELLEVUE HOSPITAL, N, Y., 1880.

This octavo volume merits more than a a mere acknowledgement of its receipt. It is the result of the effort of Prof. James R. Wood, of N. Y., to establish "A Museum of Anatomical and Pathological Specimens." The nucleus of the museum was a collection of pathological specimens given by Dr. Wood to the city in 1856, these being obtained from his private practice. It has increased in size so as to be unsurpassed by any collection in this city. "The Anatomical and Surgical dissections" are the results of prizes offered by Dr. Wood to the students of all the Medical Colleges in New York. The papier-maché collection was given by Bellevue Hospital Medical College. The whole is an absolute gift by Dr. Wood to the city. It is a most valuable collection; rare, instructive and unique. The giver and receivers of the museum will please accept the thanks of the editor of this Journal for this valuable volume.

BOOKS AND PAMPHLETS RECEIVED.

Catalogue of "The Wood Museum" of Bellevue Hospital, New York City, comprising a Descriptive and Classified List of Anatomical and Pathological Specimens. Published by the Department Press, 1880.

Buffalo Lithia Waters of Mecklenburg Co., Va., 1881. By Thos. F. Goode, Proprietor.

Progress in Medical Education. Being the Doctorate Address at the Thirty-ninth Annual Commencement of the Rush Medical College, February 22d, 1881. By J. A. Allen, M.D., LL.D. Chicago, Ill.

Unnecessary Surgical Operations in the Treatment of Diseases of Women. By Clifton E. Wing, M.D., Boston, Mass.

The Sewerage Question Considered from a Medical and Chemical Standpoint. By C. H. Tebault, M.D., New Orleans, La., 1881.

Constitution and By-Laws of the American Academy of Medicine, 1879.

Eighth Biennial Report of the Trustees, Superintendent and Treasurer of the Illinois Asylum for Feeble-Minded Children. At Lincoln, Ill., Oct., 1880.

Manual of Medical Electricity of the Galvano-Faradic Manufacturing Company, New York, 1881.

Capon Springs and Baths, Hampshire Co., West Va., 1881.

Cerebral Anatomy Simplified. By S. V. Clevenger, M.D. (Reprint from *Chicago Medical Journal and Examiner*, November, 1880.)

The Results of Treatment in over Eight Hundred Cases of Alcoholism. By J. K. Bauduy, M.D. (Reprint from *St. Louis Courier of Medicine*, December, 1880.)

Hemiopia. By Wm. Dickinson, M.D., St. Louis. (Reprint from *Alienist and Neurologist*, January, 1881.)

The Asylums of Europe. By George M. Beard, M.D. (Reprint from *Boston Medical and Surgical Journal*, December 23, 1880.)

The Relations of Goitre to Pregnancy and Derangements of the Generative Organs of Women. By E. W. Jenks, M. D. (Reprint from the *American Journal of Obstetrics*, January, 1881.)

Tracheotomy in Croup and Diphtheria. By Drs. E. W. Lee and Christian Fenger. (Reprint from *Chicago Medical Journal and Examiner*, Oct., 1880.)

An Inner View of the State Lunatic Asylum at Utica. By William L. Trull.

Transactions of the Eleventh Annual Session of the Medical Society of Virginia, 1880.

Proceedings of the Louisiana State Medical Association. New Orleans, April, 1880.

Fifteenth Report of the Board of Trustees of the Connecticut Hospital for the Insane, 1881.

Report of the Albany Hospital for two years ending January 31, 1880.

Announcement of the Medical Department of the University of Pennsylvania for the One Hundred and Sixteenth Annual Session. March, 1881.

A Case of Exophthalmic Goitre. By N. D. Rockwell, M.D. New York, 1881.

Development and Evolution. By Rev. James Craik, D.D., LL.D. Louisville, Ky. 1881.

Treatment of Typhoid Fever. An Address delivered before the Kentucky State Medical Society. By Dr. L. S. McMurtry. Danville, Ky., 1881,

Ueber Vaginale Uterusexstirpation. By A. Martin. Berlin, 1881.

Report of the Ophthalmic and Aural Institute. New York, 1881.

The Sewerage Question. Considered from a Medical and Chemical Standpoint. By Dr. C. H. Tebault. New Orleans, 1881.

Trance and the Trancoidal State in the Lower Animals. By Geo. M. Beard, A.M., M.D. New York, 1881.

Announcement of the Twenty-First Annual Course of Instruction of the Bellevue Hospital Medical College, 1881-82. New York.

Eighth Biennial Report of the Illinois Asylum For Feeble-Minded Children. Lincoln, Illinois, October, 1880.

Puerperal Antiseptic. The Use of Bromo-Chloralum in the Lying-In-Room, etc. Bromo Chemical Company. New York, 1881.

TRANSLATIONS.

"Ubi mel ibi apes."

EMETICS IN CHILDHOOD. By M. J. SIMON, Physician of the Child's Hospital, Paris. *La France Medicale*, April 14th, 1881. By J. G. Kiernan M.D., Chicago, Ill.

The emetics I have employed in preference in the treatment of children have been the vegetable ones like ipecac, narcissus or senega. The dose of powdered ipecac necessary for a new-born child is three grains, for a child one year old five grains, between one and two years eight grains, and beyond two years ten to fifteen grains. Generally I give this quantity of powered ipecac in the syrup of ipecac, taken in teaspoonful every ten minutes till vomiting is produced.

This mixture can be rendered very pleasant to the taste and smell by modifying it thus:

℞. Pulv. Ipecac, - grs. v. to xv.
Syrup Violet, - ℥ i.
Syrup Simplex, ℥ iv.

Narcissus flowers infused possess emetic properties which may be utilized in cases where the children refuse ipecac. Senega may be given in bronchitis with much adhesive secretion, or where it is necessary to have recourse to contra-stimulants.

Tartar emetic should be employed with great care; only when ipecac is not sufficient to produce vomiting, and its administration should be suspended when its effects are obtained. In general for children of less than a year I have administered the tartar emetic in lemonade after the following formula:

℞. Tartar Emetic, - - gr. 3-5.
Lemonade, - - - ℥ iii.

MS. Divide in three or four doses and take every ten minutes.

Over two years I would advise the pushing of the dose to five-sixths of a grain. In cases of profound inflammatory disease of the lung, tartar emetic should be avoided as it has a tendency to reduce the strength of the already much exhausted patient. In stridulous laryngitis I add to the usual emetic an anti-spasmodic mixture like the following:

℞. Kermes Mineral, grs. 5-6 to 10-6.
Tr. Aconite Rad., gtta. v to x.
Tr. Belladonna, - gtta. v to x.
Syr. Aurant Flos., ℥ i.
Lemonade, - - ℥ iv.

Give of this a dessert spoonful every hour or half hour pro re nata.

The second attack which usually comes on the next night is often warded off by this. I occasionally substitute for kermes mineral, sulphate of copper in about the same doses. Emetics are also indicated in the slight or intense laryngitis which precedes the onset of croup and in this latter case it would be well to use them with caution for fear of their adding to the already enfeebled condition produced by the diphtheritic poison. In bronchitis of the middle and greater bronchi emetics are valuable in the second period when the humid râles have made their appearance. In bronchitis of the lesser bronchi emetics should be used but once or twice and then given place to revulsive and tonic medication. In capillary bronchitis they are absolutely contraindicated since they can produce only a depressing effect.

In whooping cough I usually give one or two emetics in the first period, then an emetic every two or three days in the period of characteristic cough. In the diseases of the alimentary canal emetics may be largely employed. In diphtheritic angina I occasionally gave an emetic at its onset and repeated this at the time when the disease appears about to extend to the larynx. An emetic at the onset of an eruptive fever offers often the advantage of provoking a cutaneous fluxion which decides a tardy eruption.

Convulsions are often the consequence of troubles of the digestion and emetics are then very frequently of avail.

TREATMENT OF ECZEMA. By M. MOOK. *La France Medicale,* March 22d, 1881.

Independently of the general treatment of this disease much depends upon its treatment according to the place where the disease is found. In eczema of the head of the impetiginous form a mask of caoutchouc perfectly adapted to the volume of the head should be used; after some days the crusts fall and recourse is then had to frictions with glycerated oil of cade or oil of cade cut with oil of sweet almonds. Cutting the hair is not necessary. In eczema of the squamous variety the caoutchouc mask alone often suffices for a cure. In moist eczema of the hair and scalp Neumann claims to have obtained good results with the following:

℞. Alum.
Soda Biboras, āā grs. xx.
Glycerine, - - ℥ iv. ʒ i. ℈i.
M.

In impetiginous eczema of the face limited to patches and but little spread I have used the following pomade with great advantage:

℞. Cerate Anhydrate, - ʒ vi.
Hydrarg Oxid Rub., ʒ i.
Tr. Benzoin, - - - gtta. x.
M.

In more extensive eczema of the face the crusts are removed by cataplasms then glycerated oil of cade, or oxide of zinc ointment, or calomel, or tannin, or better still the following may be had recourse to:

℞. Glycerine - - - - ℥ ss.
Spts. Vini. Recti., - – ℥ ss.
Acid Carbol, - - - ʒ ss.
Aquæ destill, - - - ℥ vii.
M.

In eczema of the beard simulating sycosis, cataplasms or astringent lotions are applied and then epilation is had recourse to.

In eczema of the ear the indications are at first for emollients and then for astringents. Fissures are treated at night by oxide of zinc ointment or glycerated oil of cade and then the next morning they are powdered with starch. If the eczema invades the external auditory canal emollient injections are made and a small tampon of wadding smeared with oil of sweet almonds lukewarm, and laudanum, and the whole covered by a cataplasm. In the chronic form Duplay employs astringent injections.

In eczema of the nose glycerated tannin is often found useful. Fournier Neumann employs suppositories of the following composition:

℞. Cacao Butter, - - - grs. xv.
Oxide of Zinc Ointment, grs. 2½.
M.

Taidler treats eczema of the lips with frictions, with black soap purified by alcohol and rendered aromatic with tincture of benzoin.

In eczema of the hands, fingers of caoutchouc and glycerated oil of cade are often found useful. Hebra recommends the following:

℞. Ol. Olivæ, - - ℥ viii. ℥ iv.
Litharge, - - ℥ ii. ʒ ii.
Heat to a soft consistency and then add
Essence of lavender, ʒ i.

In eczema of the breast diachlon or a sligh solution of sublimate (Hebra) or a breast plate of caoutchouc (Fournier) are often found useful.

In anal eczema an astringent water often leads rapidly to recovery. Bazion uses this pomade:

℞. Ferrum Sulphate, - grs. 7.
Acetum, - - - - ʒ ss.
Adeps, - - - - ℥ i.
MS.

Doyon recommends the following:

℞. Milk of almonds, - - - ℥ i.
Sublimate Corrosive, - - grs. ¼.
Chlorhydrate of Ammoniæ, grs. ¼.
M.

F. Gayon makes use of the following glycerated mixture:

℞. Glycerated Starch, - ℥ ii.
Subnitrate of Bismuth, ʒ iss.
Oxide of Zinc, - - - ʒ iss.

Doyon also advise the use of carbolic acid in addition.

In eczema of the genitals, Vidal

employs an astringent wash. Devergie the following solutions:

℞. Alum, - - - - grs. x.
Aquæ, - - - - ℥i. ℈i.
M.
Or, ℞. Hydrarg. Chlor. Corr., x.
Aquæ, - - - - ℥i. ℈i.
M.

Delioux of Savocquac treats this condition by

℞. Infusion of Mauve., - oj.
Filtered Cherry Laurel
Water, - - - - ℥i. ʒiv.
Sub. Borate of Soda, - ʒiiss.
M.

Vidal uses the following:

℞. Aquæ, - - - - ℥v.
Hydroleate of Roses, ℥iii. ʒii.
Chloral Hydrate, - ʒss. ℥iiss.
M.

After the lotion is applied the part should be dusted with starch.

Eczema of the nails is best treated by the application of finger pieces of caoutchouc.

The Use of Alcohol in Children's Diseases.

By Jules Simon. From the *Gazette des Hôpitaux*, March 22d, 1881.

I wish to speak to-day of the use of alcohol as employed in childrens diseases. According to the age of the patient or its pathological state when the newly born child neither cries nor struggles, and if it appears as if asphyxiated and unable to breathe, then after having had recourse to artificial respiration alcohol should be had recourse to; first in applications to its exterior in the shape of bath wine; and second to the interior in the shape of coffee spoonfuls of a mixture of a dessert spoonful of malaga in a glass of Bordeaux, dropped drop by drop in the mouth of the child.

Alcohol not only serves to strengthen the child but in the circumstances of which I have spoken it is an excellent means of producing a reflex action and reanimating a little being almost deprived of its life.

It is a strange fact that in patients attacked by capillary bronchitis, broncho-pneumonia, or pneumonia the greater number of the remedies in use are such as deprive the already exhausted child of much of its strength and which but go against the curative action proposed to be accomplished by them, although in spite of the great calorification produced by the disease alcohol often acts wonderfully and constitutes with vesication a valuable means of treatment.

At the onset or perchance at the end of the disease the time may arrive when an emetic is indicated, but later from half to three quarters of an ounce of brandy should be prescribed, or from an ounce and a quarter to two ounces of malaga wine, in gum julep to be taken every hour.

On the contrary in diseases of the respiratory passages like stridulous laryngitis, acute laryngitis or acute inflammation of the greater or middle size bronchitis it is not alcohol that is needed but emetics, nervines, revulsives, etc., on condition that the patients strength be not too much reduced.

In chronic bronchitis and phthisis alcohol is indicated more especially the latter.

I have prescribed for children attacked by these diseases a complete system of treatment, first, during fifteen days the use of the sulphurous mineral waters; then before and during each meal malaga wine and water or brandy and water; arsenic and phosphate of lime for fifteen days each, then beer or extract of malt, together with revulsives either of tincture of iodine, thapsia plasters, or fly blisters.

Passing now to the digestive tract I would say no alcohol in acute angina of acute tonsillitis but in diphtheria give alcohol freely whether internally or externally. Do not resort to cauterization but sponge the surface with citron juice, wine or aromatic vinegar mixed with warm water and as a gargle carbolic acid should also be used in the local treatment.

As to internal treatment avoid all the agents capable of enfeebling the patient, mercury, the alkalines, potassium bromide, etc., and use only means calculated to sustain strength, like the wines, coffee, brandy, tea, and at the same freely feed the patient. Absolutely reject emetics, purgatives, vesication and leeches which though apparently useful serve but to diminish the patient's strength.

To the children of great cities often atonic and dyspeptic, alcohol may be prescribed with advantage, malaga and quinine, mixed with water or the quinine and burgundy mixed with water at the beginning of a meal, or pure if taken at its end. However when to this atony this dyspepsia is added a certain degree of congestion of the liver, a frequent phenomenon in children which may be recognized by a coated tongue, a labio-nasal fold of a pale yellowish color, a semi-icteric tint with ordinary constipation, alcohol is then not to be used, for it can but exaggerate the hepatic congestion and the dyspepsia,

In the choleraform diarrhœa which is observed among children during the summer and which coming on after an enteritis leads to a rapid decrease of strength, if bismuth and laudanum have not produced any effects, I order immediately friction with alcohol and wine of malaga in tablespooful doses internally: when the extremities have resumed their usual hue I order the alcohol stopped and resume the use of opium and bismuth.

In the pyrexias where the temperature is markedly elevated and the general functions interfered with, as in typhoid, scarlet, and other cruptive fevers, the more elevated the temperature, the greater the indication for alcohol which will diminish the delirium, the ataxic or adynamic condition. Formerly the cordials, vinous drinks, etc., were employed in typhoid as stimulants, to-day they are employed not only to fulfil this indication but also to reduce combustion and lower the temperature, alcohol however has the inconvenience of reducing the urinary secretion. It has been praised and recommended for its value in acute rheumatism, but I reject it absolutely because of the before mentioned action on the urine.

Beside the pathological conditions just mentioned, there exist certain morbid conditions like anæmia, chlorosis, scrofula, scorbutus and rachitis where alcohol is greatly indicated.

In the anæmias must be distinguished a spontaneous rapid acute anæmia of traumatic origin, consecutive to a hæmorrhage, where alcohol ought to be immediately prescribed, and a chronic profound anæmia which is the result of all kinds of affections, here as in scorfula the best treatment consists in first bctter alimentation and excellent hygiene. Second the administration before meals of an aperient syrup like the syrup of gentian; third alcohol before the meal in the shape of extract of malt, or wine of quinine mixed with water. In no case should astringents be used before the age two, for fear of impairing the digestion; fourth, cod liver oil added to wine or porter or extract of malt in the dose of a few drops at first then a stronger dose in order to accustom the child gradually to it. In case of hepatic congestion wine and cod liver oil should not be prescribed as they are then badly borne.

Cod liver oil given too long after the meal is often badly digested and gives rise to diarrhœa and indigestion. I then suspend its use once or twice a week and on those days give a laxative or a little purgative mineral water to avoid loading the liver with too much fat.

Among the rachitics and scrofulas I order also the phosphate of lime in powder, in syrup, or in solution, as also sulphurous baths, salt baths, alcoholic frictions, and the same for the chlorotics in order to stimulate the functions of the skin and increase the capillary circulation.

In chlorosis I prescribe alcohol before meals, the vegetable bitters in atonic patients, iron to little giris of twelve or thirteen years who have not yet menstruated, or in whom menstruation is badly performed; hydro-therapeutic massage, exercise proportionate to their powers, and the same ferruginous tonics given when dealing with true chlorosis or with the chlorotic state which masks the onset of tuberculosis.

Finally there are certain particular states where alcohol is indicated, such as malformations of the heart, persistence of the foramen of Botal, asystole, passive hypertrophy etc.

Note—It is refreshing to find that the best French treatment recommended in these two articles is in no respect superior to that adopted by fair practitioners in America—E.S.G.

———o———

CHEMISTRY.

"Diruit ædificat, mutat."—Hor.

Coffee.—Its uses and Medicinal Qualities. By Henry Segur, M.D.

Doctor Bock, of Leipsic, says:—"The nervousness and peevishness of our time are chiefly attributable to tea and coffee;" he says that "the digestive organs of confirmed coffee drinkers are in a state of chronic derangement, which reäcts on the brain, producing fretful and lachrymose moods. Ladies addicted to strong coffee have a characteristic temper, which may be described as a mania for acting the persecuted saint," etc.

I cannot agree with Dr. Bock that the nervousness and peevishness of the present time are to be attributed to the use of coffee. If people are more nervous or in worse humor now than formerly, we may find other causes arising from the customs and habits of society much more likely to produce such a state of things than the use of this particular article of diet. I have no intention of pointing out many changes and peculiarities in the habits of the age to show many other more prominent reasons for people being in bad humor besides the use of coffee. My object is to defend coffee from a slander aimed at one of our best friends —a friend more likely to relieve the morbid state of things complained of than to produce it. Who that has experienced the good effects of coffee can sit quietly and hear it abused? especially by an estimable physician who has written learned books on the nervous system. The nerves of every honest friend of coffee tremble with the shock of an attack from such a quarter.

Let us examine the effects of coffee on the economy. Taken in moderation it is a mental and bodily stimulant of a most agreeable nature: and, followed by no harmful reäction, it produces contentment of mind, allays hunger and bodily weakness, and increases the incentive and capacity for work, makes man forget his misfortunes, and enables those who use it to remain a long time without food or sleep, to endure unusual fatigue, and preserve their cheerfulness and contentment.

Jomand says: "An infusion made with ten ounces of coffee enabled me to live without other food for five consecutive days, without lessening my ordinary occupations, and to use more prolonged muscular exercise than I was accustomed to, without any other physical injury than a slight degree of fatigue and a little loss of flesh."

The mental exhilaration, physical activity, and wakefulness it causes, explain the fondness for it which has been shown by so many men of science, poets, scholars, and others devoted to thinking. It has, indeed, been called the intellectual beverage."

It supported the old age of Voltaire, and enabled Fontenelle to pass his hundred years.

The action of coffee is directed chiefly to the nervous system. It produces a warming, cordial impression on the stomach, quickly followed by a diffused, agreeable nervous excitement, which extends itself to the cerebral functions, giving rise to increased vigor of imagination and intellect, without any subsequent confusion or stupor, such as are characteristic of narcotics.

Coffee contains essential principles of nutrition far exceeding in importance its exhilarating properties, and is one of the most desirable articles for sustaining the system in certain prostrating diseases; compared with the nutrition to be derived from the best of soups, coffee has decidedly the advantage, and to be preferred in many instances. (! !)

Liebig says: "We shall never know how men were first led to the use of coffee, but that we may consider the article so remarkable for its action on the brain and the substance of the organs of motion, and as an element of food for organs as yet unknown, which are destined to convert the blood into nervous substance, and thus recruit the energy and the nervous moving and thinking faculties."

The medicinal effects of coffee are very great. In intermittent fever I have used it with the happiest effect in cutting short the attack, and if properly managed is better in many cases than the sulphate of quinine. In that low state of intermittent, as found on the banks of the Mississippi River and other malarial districts, accompanied with enlarged spleen and torpid liver, when judiciously administered it is one of the surest remedies. In these cases it should be given in decoction made with four ounces of well roasted and ground coffee, boiled in a pint (16 ounces) of water in a covered vessel, down to half a pint (8 ounces), and two tablespoonfuls given hot every two hours, commencing six hours before the expected attack, and keeping the patient well covered in bed.

It has been found that in typhus fever coffee increases the elimination of urea, and so far purifies the blood without increasing the destructive metamorphosis of tissue, and that it lessens coma and low delirium.

In yellow fever, from a long experience, I consider coffee as my chief reliance, after other necessary remedies have been administered; it restrains tissue change, and thus becomes a conservator of force. in that state in which the nervous system tends to collapse, because the blood has become impure; it sustains the nervous power until the depuration and reorganization of the blood are accomplished, and has the advantage over other stimulants in inducing no injurious secondary effects.

In spasmodic asthma its utility is well established, also in whooping cough, stupor, lethargy, etc.

In the hysterical attacks of some

females, for which the physician can form no diagnosis or cause for the peculiar and eccentric symptome manifested; a screaming, crying, staring, kicking patient, with no coherent answer for the medical adviser, at the same time with an evident tendency to act the presecuted saint—give her a cup of well made, strong, black coffee, she becomes quiet, revives, smiles benignly, as if she had swallowed a panacea that had suddenly delivered her from the clutches of the imps of Satan and wafted her from all the miseries of a condemned and tortured spirit to the Elysian fields.

We have used it as a remedy in croup, diphtheria, nephritis, chronic diarrhœa, etc. In poisoning from opium it is well known as the best remedy, and always on hand.

Hayne says: "That in a case of violent spasmodic disease, attended with short breath, palpitation of heart, and a pulse so much increased in frequency that it could scarcely be counted, immediate relief was obtained from a cup of coffee, after the most powerful antispasmodics had been used in vain for several hours," etc.

After a hearty meal a cup of coffee will relieve that sense of oppression so apt to be experienced; and enable the stomach to perform its offices with comparative facility.

In fact, coffee carries healing on its wings. It is opposed to malaria, to all noxious vapors; as a disinfectant it has wonderful powers; as an instantaneous deodorizer it has no equal; for the sick room, the fetid odors arising from cutaneous exhalations are immediately neutralized by simply passing a chafing dish with burning coffee grains through the room.

It may be urged that an article possessing such powers and capacity for such energetic action must be injurious as an article of diet of habitual employment and not without deleterious properties; but I have never noticed any corresponding nervous derangement after its effects have disappeared, as is seen in narcoties and other stimulants. The action imparted to the nerves is natural and healthy, and I must positively deny that the habitual use of the article is injurious.

Habitual coffee drinkers generally enjoy good health and live to a good old age. Some of the oldest persons I have ever known have used it from earliest infancy without feeling any depressing reaction, such as is produced by alcoholic stimulants.

In Porto Rico our fairest part of creation, at the tenderest age, have been induced to forget the delicious draught from the maternal fountain by the substitution of a decoction of coffee, which soon becomes the daily beverage.

Mayaguez, Porto Rico, 1881.

Action of Anæsthetics on Plants.—Claude Bernard has shown, says the *Lancet.* that the vapor of chloroform and of ordinary ether hinders the germination of seeds, and M. Rabuteau has found that this is equally true of bromide of ethyl and bromide of amyl. He finds, also, that all the ethers have the same effect. The experiment were made with grass seeds; but the property of germination is merely restrained. Seeds kept thirty-seven days exposed to the vapor of bromide of ethyl or bromide of amyl germinated, when placed under proper conditions, in two days. The question then presents itself: Have these substances a similar action upon plants which are in full progress of growth?

DEATH OF HESCHL.—Heschl, who succeeded Rokitansky in the University of Vienna, died of pulmonary disease, May 27th.

Glucose and Grape-Sugar. By Professor HARVEY W. WILEY.

The manufacture of sirup and sugar from corn-starch is an industry which, in this country, is scarcely a dozen years old, and yet it is one of no inconsiderable magnitude. On August 1st, 1880, ten glucose-factories were in operation in the United States, consuming daily about twenty thousand bushels of corn. These, with their several capacities, are as follows :

Firmenich's, Buffalo	4,000	bushels.
Buffalo, Buffalo	5,000	"
American, Buffalo	3,000	"
Higher, St. Louis	1,000	"
Peoria Refinery, Peoria	2,500	"
Peoria Grape-sugar, Peoria	850	"
Davenport, Davenport, Iowa	1,500	"
Freeport, Freeport, Illinois	1,500	"
Duryea, Brooklyn	1,500	"
Sagetown, Sagetown, Illinois	250	"

At that time, also, there were in process of construction nine factories, with a total capacity of twenty-two thousand bushels daily.

At the same time additional machinery was in process of erection in the two Peoria factories, which increased their capacity two thousand and twenty-five hundred bushels, respectively.

The new factories were building in—

Detroit	capacity,	3,000	bushels.
Chicago	"	10,000	"
Geneva	"	1,000	"
Iowa City	"	1,500	"
Danville, Illinois	"	1 500	"
Tippecanoe, Ohio	"	500	"
Rockford, Illinois	"	1,000	"
Pekin, Illinois	"	500	"
Marshalltown, Iowa.	"	3,000	"

We may safely assume that at the present time one half of these new factories are in running order. The total daily consumption of corn, therefore, for sugar and sirup-making, is not far from thirty-five thousand bushels.

Eleven million bushels of corn during the present year will be used for this purpose, and every indication leads us to believe that the amount will be doubled in 1882.

The capital invested in this sugar industry is likewise no inconsiderable one. Taking the large and small establishments together, each thousand bushels of daily capacity represents sixty thousand dollars of capital. Over two million dollars are therefore actively employed in the glucose-works. The number of men employed amounts to about sixty for each thousand bushels capacity, making a total of twenty-one hundred. On account of the nature of the process of manufacture, the mills are run night and day, and work is not entirely suspended on Sunday.

To avoid confusion of ideas, the following statements seem necessary: The word *glucose*, in this country, is employed among dealers to designate exclusively the thick sirup which is made from corn-starch. On the other hand, *grape sugar* is applied to the solid product obtained from the same source. The *glucose* and *grape-sugar* of the trade have optical and chemical properties quite different from many other substances bearing the same name. I shall use the words in the signification explained above.

Properties of Glucose.—Glucose is a thick, tenacious sirup, almost colorless, or of a yellowish tint. It has an average specific gravity, at 20° C., of 1·412. That which is made for summer consumption is a little denser than that manufactured for winter use. This sirup is so thick that, in the winter, it is quite difficult to pour it from one vessel to another.

The sweetness of glucose—i. e., the intensity of the impression it makes on the nerves of taste—varies greatly with different specimens. Some kinds approach in intensity the sweetness of cane-sugar, while others seem to act slowly and feebly. It has been shown that the degree of sweetness depends on the extent of the chemical changes which go on in the conversion of starch into sugar. When the process of conversion is stopped as soon as the starch has disappeared, the resulting glucose has a maximum sweetness.* The color of glucose depends on the thorough washing of the substance, during the process of manufacture, through animal charcoal, and lowness of temperature at which it is evaporated, and rapidity of evaporation. The methods of securing these conditions will be described further on.

There is one variety of glucose which is made for confectioners' use, which is much thicker and denser than that just described. Its specific gravity may reach 1·440, but it has no tendency to become hard and solid, like the so-called grape-sugar.

The grape-sugar made from corn-starch, when well made, is pure white in color when first made, but has a tendency to assume a yellowish tint when old. It is hard and brittle, does not usually take on a visible crystalline structure, and is less soluble in water than cane-sugar. Perhaps it would be more accurate to say that it dissolves more slowly, since both cane and grape-sugar dissolve in all proportions in hot water. I have found its specific gravity to be as high as 1.6. It is much less sweet to the taste than glucose, and a faint bitter after-taste is to be perceived.

Uses of Glucose and Grape-Sugar.—Glucose is used chiefly for the manufacture of table-sirups, candies, as food for bees, for brewing, and for artificial honey.

It is impossible at present to get any reliable statistics concerning the amount of glucose used in beer-making. The brewers themselves try to keep its use a secret, since it is quite common to proclaim that beer is made from barley and hops alone, although this is rarely the case. Dealers and manufacturers are likewise reticent when approached on this subject, since it is but natural for them to wish to protect the interests of their patrons. We shall not go far wrong, however, when we say that the amount of glucose used by brewers is by no means small, and that the quantity is constantly increasing. I do not know any reason why its moderate use should injure the quality of the beer.

Bees eat glucose with the greatest avidity, or, rather, they acts as funnels by which the glucose is poured into the comb. For it is quite true that honey made by bees which have free access to glucose differs scarcely at all from glucose itself. But the quantity of honey which a bee will store away when fed on glucose is truly wonderful. This gluttony, however, rapidly undermines the apiarian constitution, and the bee rarely lives to enjoy the fruits of its apparent good fortune. In commercial honey, which is entirely free from bee mediation, the comb is made of paraffine, and filled with pure glucose by appropriate machinery. This honey, for whiteness and beauty, rivals the celebrated real white-clover honey of Vermont, but can be sold at an immense profit at one half the price.

All soft candies, waxes, and taffies, and a large proportion of stick-candies and caramels, are made of glucose. Very often a little cane-sugar is mixed with the glucose, in order to give a sweeter taste to the candies, but the amount of this is made as small as possible. As has been stated above, the glucose which is used in confections is evaporated nearer to dryness than that which is used for sirups. In such glucoses I have found the percentage of water to be as low as 6.37. Such a product is almost thick enough for "taffy" without any further concentration.

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* See paper read by the author at the Boston meeting of the American Association for the Advancement of Science.

A very large percentage of all the glucose made is used for the manufacture of table-sirups. The process of manufacture is a very simple one :

The glucose is mixed with some kind of cane-sugar sirup until the tint reaches a certain standard. The amount of cane-sugar sirup required varies from three to ten per cent., according to circumstances. These sirups are graded A, B, C, etc., the tint growing deeper with each succeeding letter.

When these sirups are sent into the shops, they are sold to consumers under such altisonant names as "Maple Drip," "Bon Ton," "Upper Ten," "Magnolia," "Extra Choice," "Golden Drip," "White-Loaf Drip," etc. Dealers tell me that these sirups, by their cheapness and excellence, have driven all the others out of the market. So much is this the case that it is no longer proper to call glucose the "coming sirup." It is the sirup which has already come.

In addition to the uses above mentioned, small quantities of glucose are used by vinegar-makers, tobacconists, wine-makers, distillers, mucilage-makers, and perhaps for some other purposes.

Grape-sugar is also used for many of the purposes enumerated above, but chiefly for the adulteration of other sugars. When it is reduced to fine powder, it can be mixed with cane-sugar in any proportions, without altering its appearance. Since the grape-sugar costs less than half the price of cane-sugar, this adulteration proves immensely profitable. The presence of grape-sugar in table-sugars can be approximately determined by several simple tests. When placed on the tongue, the bitter after-taste, already spoken of, may be detected. If spread in a thin layer on a piece of glass, and treated with a little water, the cane-sugar granules dissolve first, and the grape-sugar is left as a flocculent mass. With the microscope, its particles can be detected by the absence of all crystalline structure. Its exact quantity can only be determined by the polariscope. This is hardly a proper place to describe how this is done.

From the best information I can obtain, it appears that the cost of manufacture of glucose and grape-sugar is about one cent a pound. From twenty-six to thirty-two pounds are made from a bushel of corn. It is sold by the manufactories at three to four cents per pound. In the West the price of corn during the last year has averaged a little over thirty cents per bushel. It thus appears that the manufacture of glucose is a profitable industry.

I shall attempt here no detailed statement of the method of manufacture, but give only such an outline as may interest those who like to know how the things on their tables are prepared. The corn is first soaked for two or three days in warm water, and is then ground on specially prepared stones with a stream of water. The meal is next passed into a trough, the bottom of which is made of fine bolting-cloth. Here the starch is washed through, and led to large tanks, where it is allowed to settle. It is next beaten up with caustic soda to separate the gluten, and the starch is again allowed to settle in long, shallow troughs. The starch, washed from all adhering alkali, is next beaten up with water into a cream, and conducted into the converting-tubs. These tubs are supplied with coils of copper steam-piping and are made of wood. Here the starch-cream is treated with dilute sulphuric acid, and steam is allowed to bubble up through the mixture from small holes in the copper pipes. This process of conversion, which is called "open conversion," is completed in about two hours.

Another method is called "close conversion." The substances are inclosed in stout copper cylinders, and subjected to the action of superheated steam. This process occupies about fifteen minutes.

The conversion is also accomplished by fermentation. This requires a much longer time. The greater part of it, however, is carried on by the method first named.

After conversion the acid is neutralized by marble-dust and animal charcoal. Since the sulphate of calcium, which is formed in this operation, is slightly soluble in water, carbonate of barium has been used instead of marble-dust. Its use, however has not become general.

After neutralization the liquid is filtered through cloth and animal charcoal, and is then conveyed to the vacuum-pan. Here it is evaporated, at as low a temperature as possible, to the required concentration. If grape-sugar is to be made, the process of conversion is not stopped as soon as the starch has disappeared, but is carried on still further to a point which can only be determined by trial. After concentration it is conveyed into tanks, where the process of solidification begins and continues for several days.

Glucose, on the other hand, will not harden, whatever the degree of concentration may be, or, at least, if it do so, only partially and after many months.

The habit of bleaching both glucose and grape sugar by means of sulphurous acid is sometimes practiced, but is reprehensible. By the oxidation of the sulphurous acid, free sulphuric acid is likely to occur in the finished product.

Glucose a grape-sugar is a mixture of several chemical substances. Starch, which is composed of six atoms of carbon, ten of hydrogen, and five of oxygen, when subjected to the action of dilute sulphu ic acid, appears to undergo a molecular condensation and hydration. Among the substances formed may be reckoned dextrine, glucose, and a substance isomeric with cane-sugar. This latter substance appears to be one of the early products of conversion, and this is the reason that the poorly converted glucoses are sweeter than the well converted. It is only after prolonged boiling with dilute acid that the product becomes chemically homogeneous, with a constitution which is probably represented by the symbol $C_6H_{12}O_6H_2O$.

Glucose presents several anomalies when examined with polarized light. Its highest rotatory power is found when it is made with the least possible amount of conversion—i. e., when the process of conversion is stopped as soon as the starch has disappeared. Continued boiling with dilute acid causes a gradual decrease of rotatory power. It is only after six or eight hours' heating to a temperature of 104° C, that a constant rotatory power is reached. This power is only about half that exhibited by the glucose as a maximum. This minimum rotatory power, however, is greater than that possessed by cane-sugar.

Glucose, like many other bodies, has the property of reducing a hot alkaline copper solution and separating the metal as a red sub-oxide. This power in glucose is always inversely as the rotating power. I have shown this fully and conclusively in the paper already referred to. The relation between reducing power and rotating power is a constant one, and hence the percentage of reducing power can be calculated from the polarimetric observations. This, however, is of more interest to the practical chemist than to the general reader, and I therefore pass it by.

The question of most practical importance is, "Is glucose a wholesome article of food? I do not hesitate to answer this question in the affirmative. I mean by this, however, a glucose which is properly made. Such a glucose contains only a little sulphuric acid and lime, not much more than good spring water, and perhaps an almost infinitesimal trace of copper, so light as only to be detected in a large quantity of the substance. I do not doubt but that glucoses have been sold which contain large quantities of free sulphuric acid and likewise other injurious ingredients. But these are due to carelessness in manufacture, and are not constituents of the genuine article. I have never found a glucose of this kind. Many of the impurities which have been imputed to glucose, really belong to cane-sirups with which they have been mixed. These largely adulterated glucoses should always be looked upon with suspicion. The cane-sirups, which are used for this purpose, yield from three to five per cent. of ash, while the ash from a genuine glucose is so little as to be almost unweighable.

There is no reason to believe that a glucose or grape-sugar properly manufactured is any less wholesome than cane or maple-sugar. Corn, the new American king, now supplies us with bread, meat, and sugar, which we need, as well as with the whisky which we could do without.—*Chem. Jour.*

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

EUCALYPTUS GLOBULUS AS AN ANTISEPTIC.—THE last meeting of the Clinical Society was of considerable interest to surgeons, and especially to those who practice antiseptic surgery as taught by Professor Lister. The subject of carbolic intoxication was raised by Mr. Pearce Gould, who asserted that he had had a fatal result from it, and Mr. Lister assented to his views, so that we may speak with confidence of their substantial truth. For the first time exact minute pathological changes were identified with the toxic effects of the acid in man, and although the observation needs corroboration, it yet throws light upon much that has been hitherto obscure. We are glad to observe that there was no attempt made to make this case a text for an attack upon any "system," or even upon carbolic acid itself. And we are particularly glad of this because Professor Lister was better able to make an important statement, which was a most welcome sequel to such a case. He frankly recognised the fact that there are some persons injuriously affected by carbolic acid, and that while many substitutes for it—thymol, salicylic acid, sulphurous acid, and so forth, —have been tried at various times, they have all been abandoned on account of drawbacks, even more serious than that attaching to phenol. His trials, however, of the oil of Eucalyptus globulus have shown him that while entirely free from toxic or locally irritant effects, it is a perfectly trustworthy antiseptic. Where therefore, we have reason to fear carbolic absorption or where the carbolised gauze causes toxic effects, the oil of eucalyptus may be used without in any way imperilling the results of so-called asepticism.

But the oil has its own drawbacks: one is its insolubility in water, and another the rapidity with which it evaporates from most of its solutions. An oily solution would very quickly become quite inert as an antiseptic for this reason: resin holds it in combination more firmly, but dammar gum, such as is used in mounting microscopical preparations, is better still, and has been chosen by Professor Lister as the medium for its employment. Gauze impregnated with this mixture and paraffin has been prepared, and is in appearance and feel exactly like carbolised gauze, but unlike it in having an agreeable aromatic odour. Obviously there are other details yet to be worked out, and experience warrants the hope that Professor Lister may soon be able to announce that he has overcome the difficulties they present, and that this new and safe antiseptic can be used as generally and as easily as carbolic acid· In its cost it probably will never rival the acid, nor is it certain that it will supersede it entirely; indeed, Mr. Lister did not for a moment hold out any such idea. Carbolic acid has been well tried as an antiseptic agent, and what we are really in need of is some guidance as to the circumstances in which it is liable to act injuriously. However hopeful we may be at the discovery of an antiseptic agent which is safer than those we now possess, we should yet gladly welcome any additions to our knowledge as to the true meaning or cause of these so-called "special susceptibilities," "idiosyncrasies," and the like, which makes the means of life to one man the very cause of illness or death in another. Perhaps it is hardly to be hoped that a perfect antiseptic agent devoid of toxic properties for the human body will ever be found; for there are some, if not many, fundamental conditions alike required for the highest and the lowest forms of life. The laws governing the development of the bacteria and similar minute organisms, which are roughly classed together as germs, are probably the same, or at least closely allied to those ruling the growth of the cellular constituents of our own frames. And surprise ought not to be so much excited by the occasional occurrence of toxic symptoms when antiseptic surgery is practised, as the more striking fact, constantly observed, that these agents can be used with entire success to destroy and prevent the development of these "germs" without destroying or even affecting injuriously the vital processes so akin to them. It would be an easy matter to speak with enthusiasm of the statement of Mr. Lister, and to prophesy the attainment of perfection in the antiseptic treatment of wounds, now that he has provided us with an agent that may be called safe and certain. All such enthusiasm would be out of place, however; the new preparation must be patiently tried; and although it is only right to entertain the hope that it will be found of extreme value, it is demanded in the interest of science that any expression of opinion as to its merits should be suspended until the facts are fully before us. It is not, however, too early to draw attention to the fact that Mr. Lister has afforded us another example of his devotion to science. His name has for years been associated with the use of carbolic acid in the treatment of wounds, and with it he has accomplished remarkable results; but he has kept his mind so open to its defects, that, being the most earnest in the search, he is the first to herald the discovery of a substitute for it.

Would that all of us who have some pet theory or practice could learn this lesson !—*Ex.*

HOW TO GET RID OF FOUNDLINGS.—The methods adopted by the almshouse officials of Philadelphia for getting rid of unwelcome babies appear to be complete and efficient to a degree never before approached in a modern public institution. The death rate is precisely 100 per cent. As the president of the city board of Guardians of the Poor frankly puts it, when he protested against sending any more unfortunates to the alms house: "All of them die. None of them live; and never have we raised a child out there."

The assertion seems incredible, but an examination of the record of the institution found it to be true. It was discovered that few if any foundlings survived the almshouse treatment more than four months, and none lived more than six months. During the year 1880 there were brought to the institution 66 foundlings, of whom 30—of course the prettiest and apparently healthiest—were taken out for adoption. Of the 36 which were left all but one died within four months, and that one lived four months and one week. Nearly all died within four weeks of the time of entry.

Charges have been preferred against the management of the children's department of the almshouse by the society to protect children from cruelty and at this writing the matter is still before the grand jury.

At the request of the president of the Board of Guardians, the condition of the foundling ward was investigated by the obstetrical staff of the almshouse, who attributed the terrible mortality to bad food, impure quarters, bad air, and insufficient attendance. As given in the *Record* the report mentions that in former years there were twelve resident physicians in the institution, thus obviating the necessity for the frequent change to which the foundlings are now subjected in their medical attendance. Under the present rules of the almshouse the number of resident physicians is twenty-three, and these are young physicians, fresh from college. As these physicians are rotated every month, the infants, who should have a permanent medical officer over them, have a new physician every four weeks. The report is also understood to say that the infant ward is ventilated from a cellar room, which is used as a drying room at high temperature for the pauper clothing, so that the foundlings are compelled to breathe a vitiated atmosphere; also that they are seldom if ever taken out of this room except during the summer time. It is also said that the medical staff connected with the almshouse has from time to time protested in vain against the food supplied; that patients have actually suffered from scurvy brought on by the food, and that the milk supplied has often been not only unfit for use, but that no attention has been given to repeated warnings that this was the case.

No doubt the official baby killers will to a man testify that everything has been done by them to discourage the perverse habit of the foundlings; and that it is only by the most painstaking carefulness that the little wretches have been kept alive so long on the average. But there will remain with the people at large a distressing sense of dissatisfaction with the results of the official tender mercies of the City of Brotherly Love. As a rule foundlings are not the best possible material for making men and women out of; still a death rate of 100 per cent in six months is a little too comprehensive to be accepted with composure, even when we are assured that "the subject has been one of serious study with the doctors of the almshouse for sixteen years," during which time, it is admitted, they have been unable to rear a single foundling in the institution. Many of those who are taken away and adopted live, but none of those survive who remain in the institution.

An Advertising Fraud.—A very difficult task is it for a medical writer to prevent his name and the productions of his pen from being picked up by advertisers and used for purposes of quackery or puffing. With a certain class of obscure practitioners, the only chance of getting their names into print is to write to some advertiser how many patients they have cured by his "new remedy." This is a fair *quid pro quo*, both parties gaining by it. But when the names of old leading men of the profession are paraded on bottles and pill-boxes and preparations and certificates of various kinds, it detracts from their character and stains their professional reputation, without in any way compensating them for the damage. To explain, we lately agreed with an Eastern publisher to insert an advertisement on certain terms, presuming of course that the advertisement would be free from objection, for we had not seen it. But when it came we found it highly objectionable, and it was excluded. It referred to a book filled with prescriptions for a large number of diseases, by eminent professors in the medical colleges of New York and Philadelphia, some thirty or forty of whom are named as the authors of the prescriptions. In the list are the names of Da Costa, Flint, Gross, Stillé, Agnew, Van Buren, Hammond, Morton, Sayre, Goodell, Pepper, etc. The same advertisement appears in full in the Druggist's Circular, with a heading in large capitals, running thus: "To Druggists! *When treating your patients for any disorder you will find the book advertised below invaluable.*" A notice of the same book says: "Its value is very much enhanced by the fact that the proof sheets have, in every instance, been revised by the professors whose treatment is set forth therein." Finally, there is an endorsement and recommendation of it copied from the *Medical Record* and one from the *Cincinnati Lancet and Clinic.* That there is foul play in this transaction is patent, but it is not so clear where the trick lies. Certainly the distinguished professors would not lend themselves to such rank quackery. But the publisher, who attaches "M.D." to his name, must know all about it, and the proprietors of the Druggists' Circular exhibit more venality than principle in selling their columns to the propagation of such a fraud:—*Pacific Med. and Surg. Jour.*

Menu.—"What are them?" asked a countryman, pointing to a heaped-up dish in a restaurant down town. "Look like birds with their toes turned up. What are they?"

"Frogs, sah," answered the polite waiter; "very nice dish, sah! gentleman very fond of them?"

"Frogs! good gracious! Not the kind we have in our pond at home? Why, we and Mariah would starve afore we'd tech one."

So ignorance tears down in a moment what science has been years in discovering; and no amount of gastronomical skill will prevail on the unprejudiced rustic to taste one of his neighbors of the pond. "Ez if the critters were fit to eat," he remarks in a disparaging tone, while he orders a pound of fresh pork, which he disposes of with great relish.

The man of taste and culture who had learned the value of brain food, comes in presently and orders a dozen of the piping pond larks, and when they are brought to him, hot, crisp, delicate with that dainty rosiness of flesh which the professor of cookery knows is their prerequisite, he eats them with all the immense satisfaction of an artist in comestibles. Frogs, as an edible in Detroit alone, form an industry for a large class of people, and a special item on the bills of fare at hotels and restaurants, the largest of the last mentioned establishments showing an average purchase of 10,000 dozens during the seven months of their popularity. Unlike oysters, they are good during all seasons, but in the winter months frog-fishing is abandoned. They are caught along the River and Lake St. Clair shore in nets, but in the marshes they are speared. As soon as caught they are skinned, and the refuse parts thrown away; the largest frogs are kept alive and taken in crates of a peculiar construction to Chicago, Cincinnati, and New York.

All the hotels to which driving and pleasure parties resort, make a specialty of them as a favorite dish. Early in the spring the frog-catcher gets from 25 cents to 30 cents a dozen for them, but later in the season they are as low as 10 cents a dozen. They retail at much higher prices, as the dealer assumes the risk of fluctuations in the market. From fifty to seventy-five dozen will occasionally be ordered for parties at private houses, and fancy prices range as high as 75 cents to $1 a dozen.

As pot-pies, stews, and chowder, they are a failure. The only legitimate way to cook a frog is to fry him brown in sweet table butter. As a preliminary, he must be dipped in a batter of cracker dust, which should adhere closely when cooked, forming a dainty cracknel of a golden brown color, with a crisp tang to it when submitted to the teeth. The tender juices thus retained lose none of their delicate flavor, and the dainty morsel needs no condiments to give it additional zest.—*Detroit Free Press.*

EXTIRPATION OF UTERUS WITH BOTH OVARIES.—Dr. Chambers reported the following to the London Obstetrical Society: Jane S., aet. 45, was admitted into the Chelsea Hospital for Women, May 24, 1880. In 1870 she first noticed a lump in her right groin, which grew slowly for five years. After this menorrhagia commenced, and gradually increased. Pain and hæmorrhage were excessive, and she eventually became too weak to attend as an out-patient, and was remarkably emaciated. The tumor was freely movable from side to side, and was very soft and doughy, but without fluctuation. The pelvic cavity was unoccupied, the vagina drawn up into a cone, with the os and cervix, both small, in the center. There was a periodical discharge of watery fluid through the vagina. Hence a diagnosis of fibro-cystic tumor was made. Medical treatment having proved of no avail, extirpation of the uterus was proposed to the patient, and she decided in favor of the operation. It was performed on June 22d. The abdominal incision was extended to eleven inches. The broad ligaments were tied with silk at each side, a parallel clamp placed above the ligatures, and the uterus cut away. After a few minutes arterial hæmorrhage occurred from a large vessel, which was at once secured. The cervix was then transfixed by a double ligature, the clamp removed, the ligatures tightened, and the stump replaced. By the 21st day the patient was convalescent, a free discharge of offensive matter from the vagina having taken place suddenly on 14th day. The tumor proved to be a lobulated white fibroid, not fibro cystic, and contained very large vessels.—*Obstetric Gazette.*

TRANSPLANTATION OF NERVE AND MUSCULAR TISSUE.—T. Gluck, in the *Arch. f. Klin. Chir.*, details his success in transplantation of parts of muscles in fowls. Gluck has already made know his successful experiments of transplantation of nerve structure. He cut out a small piece of muscle in the case of fowls and replaced the loss with muscle from the rabbit; in each instance the graft united, and often the muscular structure was preserved. In a second series of experiments a piece of the gastrocnemius with its tendon was exsected and the deficiency made good with a somewhat larger piece of the corresponding muscle of another fowl. Union took place, and forty days after the operation the muscle again exhibited its proper function. Active regeneration occurs only when the inflammatory reaction is reduced to a minimum. As the result of inflammation, the graft is converted into a fibrous mass. It may be expected that the results of these experiments will induce similar operations upon the human subject.—*Centralblatt f. Chirur.*

AN IMPORTANT QUESTION DECIDED.—Both in England and this country it has long been a disputed point as to whether the lectures delivered by a professor in one of our medical schools or hospital clinics are or are not the private property of the professor. Can a hearer take a verbatim report, publish it, and enjoy the profit of its sale, without the permission of the lecturer? For many reasons most leeturers have opposed such action, and these reasons are valid, so far as the lecturer's personal feelings are concerned. He may express himself without that due care which he would use in writing for the press; the reporter may make serious blunders; the substance of the lecture may be intended for a more complete exposition of the subject in point, etc.

The Philadelphia *Medical and Surgical Reporter* contains the following excellent editorial statement: "Well conducted journals always ask permission of lecturers to have their lectures reported; and, of course, no respectable publisher would publish the reports of a series of lectures in book form without such consent."

NOTE.—It is true that, according to this statement so reasonable and just, there are few medical journals "well conducted"; and it is also true that there are few "respectable publishers"; but the position taken is nevertheless manifestly just and proper.—E. S. G.

UTERINE CANCER AND FIBROIDS.—Women, when they find that they have fibroid tumors are very apt to imagine the most terrible evils, and you will find that they are always asking if there is any danger of a tendency to cancer in their case. In regard to this point I may say that I never heard of but one instance of fibroid in which carcinoma occurred, and that was not very well authenticated. It is a remarkable fact that negro women never have cancer of the uterus, and yet, as I have mentioned, they most invariably have uterine fibroids. Some time ago there was a discussion in the journals on the subject of uterine cancer in the negress, and a distinguished medical professor of Charleston, S. C., a gentleman of immense experience in diseases of women of the African race, then stated that he had never seen a single instance of it. As another point of interest here I may mention that although I have had the opportunity of examining a vast number of cases of ovarian cyst, I have never yet met with a single instance of it in the negress.—*Dr. T. G. Thomas.*

ALTHOUGH PROFESSOR BILLROTH has some hope of attending the International Congress in August, he is still doubtful. He adds that, "four days ago, I did another resection of the pylorus, and also burnt off a piece of the liver with Paquelin's cautery. This piece of liver was inseparably adherent to the carcinoma. So far, all goes on well."

RECORDS OF OVARIOTOMY.—Mr. Spencer Wells has republished a sixth edition of his well known and valuable note-book for cases of ovarian and other abdominal tumours ; and he has slightly modified it by improving one of the diagrams, and by adding a note on antiseptic precautions taken during the operation, from which we learn that he began to carbolise the sponges and the silk used for ligatures and sutures, and to keep the instruments in carbolised water, as well as to operate under spray, in January, 1878. Since that time, he has had one hundred and thirty-seven cases, with thirteen deaths—a mortality of 9.4 per cent. This diminishing death-rate he mainly attributes to the additional antiseptic precautions. As to subsequent history, he says it is desirable to ask every patient who recovers to write once every year, on the anniversary of the operation, giving full information as to her state. From such communications, and from circulars sent to all who recovered of the first five hundred operations, he ascertained that thirty-five women, who were unmarried at the time of the operation, had married since. Of these, 14 had each had one child, 6 two, 3 three, and 3 four children ; 3 had twins. Of 259 women who were married when the operation was performed, 23 had one or more children since. Of 25 he could obtain no information. Of three hundred operations performed since the first five hundred, one patient who was unmarried at the time of the operation had married since, and had a child ; and of 158 women who were married when operated on, 9 had each had one child, 4 two, and 1 three. One had had twins, and three were pregnant when last heard of. He completed one thousand operations in June, 1880, and purposes obtaining particulars respecting all the patients who recovered.

DR. MICHAEL FOSTER'S *Manual of Physiology* has been translated into the German, with a preface, by Professor Kuhne. Kuhne points out, in his preface, that the abundant material, in spite of the moderate size, is not condensed to systematic shortness, but the whole is related in a narrative style. Farther on, he writes : "To give to students and physicians a book which is not intended merely for reference, but which, by its flowing lively style, invites the reader to go through it, is always useful, especially when the contents, including numerous matters in a state of active discussion, in which physiology is now so rich, instruct with truth and calm impartiality ; such the author has preserved throughout." The accomplished German physiologist has skilfully brought out some of the main merits of Dr. Foster's book ; the translation of it into German is a well merited compliment, since Germany is the especial home of physiology, and its literature is abundantly rich in text-books, monographs, and periodicals on physiology.

HOMŒOPATHY IN BERLIN.–The Medical Association of Friedrichstadt (Berlin) has resolved unanimously that the President should bring forward a motion in the Central Committee of the medical associations of Berlin, that it is improper for the members to consult with homœopaths. The cause for such proceedings was a lecture by L. Hoffmann, who is a member of the above Society, in which he pointed out: 1. That the medical press has, in some instances, been opened lately to homœopaths; 2. That the latter were allowed to continue their practice in "allopathic" institutions; and, 3. That even some colleagues did not refuse to consult with homœopaths.

COLOR BLINDNESS AMONG PILOTS OF STEAM VESSELS AND ENGINEERS ON RAILROADS.—In conversation on the subject of color blindness Supervising Inspector General of Steamboats Dumont said:—"Every day develops additional proof that it is necessary that pilots of steam vessels and engineers on railroads should be most carefully examined by experts of color blindness. The latest case bearing on this subject that has been brought to the attention of the authorities here is that of the pilot of the City of Austin, who, through mistaking the color of the buoys in the channel, lost the vessel in the harbor of Fernandina, Fla., on the 24th of April last. Owing to the fortunate mildness of the weather no lives were lost, but the estimated loss on the vessel and cargo is $200,000.

The City of Austin being a registered vessel was not required to carry a pilot licensed by the United States Steamboat Inspectors, so she had one licensed by the State of Florida, which State had not yet followed the example of the United States steamboat service of examining the vision of pilots and refusing licenses to those found to be color blind. After the loss of the vessel named, it appears that the State Pilot Commissioners of Florida requested Messrs. Jones and Headman, United States Steamboat Inspectors at Savannah, Ga., to examine their pilot for color blindness, which they did, and found that at the short distance of six feet he could not distinguish one color from another. The physicians at St. Mary's, Ga., where this examination occurred, agreed in attributing the pilot's defective vision to the excessive use of tobacco. General Dumont is of opinion that if the local authorities had availed themselves of the Treasury circular of June 11, 1879, tendering the services of the Marine Hospital surgeons as examiners without fee, this accident would probably have been avoided.

JOHN HUNTER AND PROFESSOR OWEN ON VIVISECTION.—THE new volume of the *Cyclopædia Britannica* contains an admirable life of Hunter by Mr. F. H. Butler, well condensed carefully written, and thoroughly appreciative of the value and character of Hunter's work and the picturesque instructiveness of his life. This notice is one of the most valuable contributions to the enormous amount of literature which has collected around the name of the great anatomist We are glad to see included in it Professor Owen's important history of Hunter's physiological investigations and experiments on living deer and the mode of growth of their antlers, from which he deduced the information and obtained the idea on which was based his famous operation of popliteal aneurysm by ligature of arteries at a distance. This account by Professor Owen of John Hunter and vivisection, which was published by us from Professor Owen's manuscript (Feb. 22nd, 1879, p. 284), is one of those salient facts in the history of the application of experiments on living animals to the advance of surgery and the saving of life, which the antivivisectionists so unfairly and persistently ignore.—*Exchange.*

Progress of Cremation.—Cremation is growing in favor throughout Europe. The first furnace for the purpose was erected at Milan, in 1875; the second, built at Gotha, in 1878, has been recognized by the authorities of the city, so that there the choice between burial and cremation is free to every citizen. Several societies for the advancement of the rite have been formed, some of them even in States where no preparations have been made for performing it. The International Hygienic Congress which met at Milan in September, 1880, adopted a resolution in favor of compelling the bodies of all animals dying of contagious diseases to be incinerated, and of the provision of facilities for that purpose in every parish. It also appointed a special international committee to draft and present to the several governments within a year a series of propositions for expediting the adoption of cremation. A third furnace for cremation has been built at Woking, England, but has not been used. The society having charge of it, although it is assured by the Government that the execution of its purposes will not be interfered with by the law, is seeking to obtain an express sanction of them from the Government, with the expectation that a measure recognizing cremations properly performed with an efficient apparatus will impose restrictions against the irregularities of indiscriminate cremations, and against the use of defective apparatus.

THE Population Centre of the United States, in June, 1880, has been fixed at a point eight miles west by south from the heart of the City of Cincinnati. A recent census bulletin gives the details as to how this centre is ascertained. The country is supposed to be a plane surface without weight, loaded with its inhabitants in number and position as they are found by the census returns. Each individual is supposed to be of the same weight, and the centre is the place where this great loaded plane would be exactly balanced if supported on a pivot. There has been very little movement north or south of this centre since 1790, but it has travelled steadily westward at an average rate of about fifty miles in a decade, or five miles in a year. In 1790 it was 23 miles east of Baltimore, and it is now within twelve minutes of the same latitude, but 457 miles west, or in the northern part of Kentucky. The greatest westward movement during any decade was between 1850 and 1860, when the centre travelled eighty miles. The movement during the last ten years was eight miles beyond the average, or from 48 miles east by north of Cincinnati to 8 miles west by south.

"NATURE" doubts whether our Fish Commissioners will be able greatly to increase the yield of sea-fish, like shad, herring and cod. The arguments of Malthus respecting the relations between food-supply and the increase of population are thought in England to be applicable to fish. "Sea-fish, like all other animals," it says, "are undoubtedly increasing in greater proportion than their food ; and it is obvious, therefore, that, unless man can increase their food, it is only lost labor to increase their number."

Imperfect Eyes among School Children.—Three years ago the Philadelphia Medical Society appointed a committee to investigate the condition of the eyes of the children in the city schools. The report of the committee was read by the chairman, Dr. Risley, at a recent meeting of the society. The committee had examined about

2,000 pairs of eyes, The condition of those examined, Dr. Risley said, had proved better than had been expected by the committee. The cases of impaired sight ranged from 25 per cent. among the smaller children to 40 per cent. among the older scholars. The average of diseased eyes ranged correspondingly from 30 to 60 per cent. The instances where any blame attached to the Board of Education or their sectional boards for want of care for the eyes of the children were only two, one of which was the case of the primary practicing class in the Normal School. The room is lighted by one large western window, which, owing to the position of the desks and the master's table, the children are obliged to face.

THE REALITY OF HYPNOTIC PHENOMENA.—The *Lancet* publishes an article of Dr. Charles Richet, considering the reality of the phenomena of hypnotism. It is impossible to fix upon a decisive test in this matter. We know that a fact is scientifically certain when the phenomenon, which is the evidence of it, can be reproduced at will by all persons who will use the same processes, as in the case of any chemical or physical manipulation. The phenomena of hypnotism are uncertain, intangible, and variable; different persons, even though employing identical processes, are liable to obtain very different results. The only absolute sign possible is one's own experience, and that is applicable only to himself. There are, however, certain arguments which bear upon the case with almost, if not quite, the force of a demonstration. First, it is absurd to suppose that all hypnotized persons have simulated sleep. Friends, in whom we have absolute confidence, may be among them; it is not possible to believe that they have conspired all at once to deceive us. Second, a close agreement has prevailed among certain of the phenomena of the manifestations for sixty years. "That would be a very strange simulation to be reproduced so often, in so long a time, with the same appearances—closed eylids, fibrillar movements in the muscles of the face, hallucinations of vision and hearing, catalepsy, contracture"—and this among persons strangers to each other and who may be wholly ignorant of hypnotism. Third, many of the phenomena can not be simulated without a profound knowledge of anatomy and physiology, which hardly ny hypnotic possesses. When the nerves of the hypnotized person are pressed, the muscles supplied by them contract. Who among them knows what muscles should act under the influence of a particular nerve? Yet no mistake is made. "With somnambulists one can, by direct incitation, cause contraction of the muscles (rudimentary in man) moving the auricle of the ear. Now this contraction is impossible in the individual when awake." With a certain hysteric, who came under Dr. Richet's observation, "by opening the right eye aphasia was produced; while, by opening the left eye, no such effect was obtained. Certainly, if this be simulation, one must assume that the patient knows that speech is affected by the left cerebral hemisphere, and that the retina of the right eye is in relation with this hemisphere, while the right hemisphere is useless for speech." The hysterical contractures afford equally convincing evidence. "There is no individual strong enough to preserve voluntarily the contraction of a muscle during a quarter of an hour without one perceiving in it the slightest tendency to weakness or relaxation. Now, somnambulists maintain their contractures for many hours, and on waking they have no recollection of, no fatigue from, this prolonged and improbable effort." Again, insensibility may be feigned; "but how many persons are there who would have the courage to bear, without serious reason, pricks in the face, on the nostrils, or hands; to allow their hair to be plucked out, and the conjunctiva, the nose, and the ear to be tickled; to have pins thrust into the arms; to drink nauseous liquids; to breathe with delight ammonia or sulphurous acid? Somnambulists oppose no resistance to tests like these. "Must we suppose that they exhibit heroism (and a very misplaced heroism) or anæsthesia?" It is objected that the phenomena of somnambulism are incompatible with the facts of science. But, if they are themselves facts, they can not be overthrown by *a priori* reasoning. Another objection has been made: that everything observed in hypnotism is inconstant, irregular, mobile, and that the phenomena vary with every observer and with each subject. The same is the case with other psychological phenomena, and the diversities may, in all cases, be perfectly explained by the prodigious complexity of the mind. "We ought to be really struck by the resemblances rather than the differences, for the latter are of small account relatively to what they might be."

Simple Ventilator.—Dr. McKinnon, of Windsor, Ont., has sent to the *Canadian Lancet* a sketch of a stovepipe ventilator, which may not be new in principle, but which will, no doubt, be found useful as it is simple. The stovepipe is surrounded by a cylinder of sheet iron, having a diameter large enough to leave 2½ inches of space between it and the pipe. The vitiated air of the room is admitted through an opening or openings at the lower part, and it passes upward as it is heated between the pipe and cylinder for 18 or 20 inches, according to the height of the latter, and then enters an opening in the stovepipe and passes away with the smoke.

The Beef Juice Furor.—In the present *furor* for fluid beef juice, says Dr. Fothergill, the necessity for starchy matters is being quite overlooked, or, to be very safe, underestimated. These meat products furnish—the best of them—little glycogen or animal starch, and yet that is the fuel food of the body *par excellence.* We must be guided by rational knowledge, by physiology and not by fashion, in our dietetics. When there is very feeble digestion, then the digested milk and milk gruel advocated by Dr. Roberts is to be employed.—*The Practitioner*

Cisterns and Sewage—A correspondent of a daily paper makes the following pithy comment on the drainage and water supply of some parts of the country: "My experience of country places points to the blunt truth of a remark I once heard. 'A man buys a plot of land, builds a house, and digs two holes; out of the one he drinks and into the other he casts all manner of dirt and refuse.'"—*Md. Med. Jour.*

Sugar from Old Shirts.—The English chemist, Pepper, is its inventor; thanks to sulphuric acid, old rags, like cellulose which constitutes the fibrous tissue of wood, can, as well as starch, be transformed into dextrine, then into glucose. And already in Germany there is a factory engaged in producing a similar metamorphosis in cast off clothing of all kinds.—*Lyon Médical.*

SURVIVAL OF THE FITTEST!!—*Gradual Disappearance of the Larger Animals.*—The species among the different classes of animals which exceed their congeners in size are now more than ever threatened with extermination. The progressive diminution in their numbers has been more rapid during the recent geological period because they have had man as their competitor; and the present age may be destined to witness their entire disappearance. In consequence of new competition opposed by man, more formidable than any other that the large animal had to meet, many species have already become extinct, and many of those which are still represented among the living beings are daily diminished in numbers. The animals comprising these species, being those which are hunted with profit, or those the destructlon of which is important for human security, are for these reasons inevitable the most exposed to be driven from every region in which the privileged being has established his abode. In the struggle which they have to sustain against the new rivalry they labor under the two marked disadvantages, as compared with smaller animals, that they require a more abundant supply of food and that their reproduction is less frequent and more limited, so that the loses they endure are hardly repaired. The smaller species keep up their numbers, and even increase, in consequence of their extreme fertility, in spite of the most persistent efforts of man to exterminate them. The larger animals would be totally destroyed in a short time if they had to suffer the same in proportion of losses. It is hardly rash to assert that the whales, the cachalots, the *Sirenidæ*, the morses, certain species of seals and otaries, the great white bear of the Arctic coasts, and the other bears, the large carnivorous cats (lions, tigers, etc.), the gorillas, the great armadillo, the great ant-eater, the giraffes, the elan, the aurochs, the bison, the elephants, the hippopotamuses, the rhinoceroses, the great kangaroo, the elephantine turtles, the crocodiles, the birds of the ostrich group, the great penguin of the frozen sea, etc., are threatened with the fate that has within a few centuries befallen the enormous epiornis of Madagascar, the gigantic moas of New Zealand, and within less than two centuries the dodo and the giant bird of the Island of Mauritius, the two latter species representing the largest columbid and the tallest waterfowl that have ever existed. The great carnivors are already fast disappearing before the bullets of emulous lion and tiger hunters; the whales and other large mammalia are becoming scarce. The largest of the deer, the elan, is less widely distributed than formerly; the largest of wild cattle, the aurochs, which formerly ranged over all Europe, is now found only in the forests of Lithuania and Moldavia; the bison no longer covers the prairies with boundless herds; the great armadillo is disappearing from South America, and the great kangaroo from Australia; and the numbers of the other animals we have named are gradually diminishing. It is time for science to be busy in completing the study of these animals before some of their species go to join the ranks of those which are represented only in fossils.—*La Nature.*

MECHANICAL VIBRATIONS AS A REMEDY IN NEURALGIA.—M. Boudet de Paris and Dr. J. Mortimer-Granville have published observations upon the application of mechanical vibrations as a remedy for neuralgia. The publication of M. Boudet de Paris was earliest in time; but Dr. Mortimer-Granville has been prosecuting researches on the subject for several years, while he intended to withhold the results from the public until the efficacy of the new remedy could be fully established. The publication of M. Boudet de Paris has, however, made it necessary for him to describe his own views and experiments, so far as he has gone, though he still considers them unperfected. His attention was drawn to the subject by the success of applications of ice in alleviating neuralgic pains in labor. Having persuaded himself that if the nerve affected in such pains could be strangly impressed, so as to change its state of irritation, the pain would cease, he tried the effect of tapping over the fifth nerve in ordinary facial neuralgia. The results were "very remarkable." He then devised an instrument, a *percuteur*, which would give a known number of blows in a second. The operations of this instrument were remarkable, although they are not yet considered decisive as to its efficacy. In numerous instances, pain was arrested by its application, and did not return. When applied over a healthy nerve, which was so situated as to be thrown readily into mechanical vibration, it produced a sensation like that caused by the passage of a weak, interrupted current of electricity, changing, when the action was prolonged, into a sensation of tingling, then of numbness, and finally to some twitching of the superficial muscles. A nervous headache, or *migraine*, could be produced by an application to the frontal ridges or the margins of the orbit. In some instances, when the pain existed, the sensation was aggravated by the augmented state of vibration into which the nerve was thrown through the shaking of the adjacent tissues. It is noteworthy that a comparatively high number of vibrations per second seems to relieve a dull, aching, or grinding pain, while an acutely pitched and quick pain is most frequently arrested by a slower movement of the instrument. This is in harmony with the theory that the pain is the result of abnormal nervous vibration, and that the operation of the *percuteur* is to arrest those motions by opposing counter and interfering vibrations to them. M. Boudet de Paris relates in his paper that, by the aid of a large tuning-fork and sounding-board, he caused hemianæsthesia to disappear; provoked contractions in hysterical patients at the Sâlpetrière as rapidly as with the magnet or electricity; and subdued the pains of an ataxic. With a modified apparatus he was able to produce local analgesia, often anæsthesia, in a healthy man, or a sensation of approaching vertigo, with a desire for sleep. An attack of *migraine* could be cut short by the application. Neuralgia, especially of the fifth nerve, disappeared after a few minutes' application of the instrument; but it was more difficult to get good results with the deeper-seated nerves. Both gentlemen suggest that the action of metallo-therapy, or of metallic applications, is best explained on the theory of vibrations.

A LONG-LIVED COMMUNITY.—Some curious statistics of local longevity are furnished the Providence (R. I.) *Journal* by a correspondent at Thompson Center, Windham County, Conn. At the beginning of April—the letter is dated the 11th—the resident population of the school district—excluding transient "help"—was 331. Of these 5 were over 90 years of age, 14 were between 80 and 90, and 28 between 70 and 80. The average of the first five (all men) is 93 years. The average of the next 14 (4 men and 10 women) is 82 years. The third group (8 men and 20 women) average 75½ years of age.

Percentage	of population		over 90 years	1·51
do.	do.	do.	between 80 and 90	4·23
do.	do.	do.	over 80	4·74
do.	do.	do.	between 70 and 80	8·46
do.	do.	do.	over 70	14·2

The first houses beyond the district limits, in three directions, are occupied by aged women, two of them of 87 years, the other 83 years old.

Evidently the district is a healthy one. It is pretty evident also that, like so many New England districts, it is a good one to go away from. So large a proportion of aged inhabitants indicates the early migration of most of the youth of the community to more active though possibly less healthy towns.

The College of Physicians and Surgeons, of Buffalo, has nullified the degree of M.D. recently conferred upon Wm. R. Crumb, of this city, it having been proven, upon examination, that the thesis upon which the degree was conferred was written by another person and handed to the faculty as original. If this course were adopted how many would escape degradation: or rather further degradation?

DR. ALPHONSE OULMAN, of Brooklyn, having refused to pay a fine of fifty dollars impossed on him for failing to report a case of small-pox, has been sent to jail.

THE Celebration of the Centennial Anniversary of the Massachusetts Medical Society took place in Boston, on June 7th and 8th.

PROFESSOR GEORGE ROLLESTON, M.D., F.R.S.—The death is announced by cable of Professor Rolleston, of Oxford University. Born in Yorkshire in 1829 he was educated at Gainsborough Grammar School and Pembroke College, Oxford, being elected a Fellow in 1851. He studied medicine at St. Bartholomew's Hospital, London, and served as assistant physician at the British Civil Hospital at Smyrna during the Crimean War. On his return he was appointed assistant physician to the Children's Hospital, London. In 1860 he became Linnean Professor of Anatomy and Physiology at Oxford, and two years later was made a Fellow of the Royal Society. In 1872 he became a Fellow of Merton College, Oxford. Dr. Rolleston was the author of "Report on Smyrna," 1856; "Forms of Animal Life," 1870, and "The Harveian Oration," 1873.

OBLIGATORY VACCINATION IN FRANCE.—The long agony is over in the French Academy, and the following are the conclusions adopted:

1. The Academy deems it urgent and of great public interest to enact a law rendering vaccination obligatory.

This conclusion was adopted by 46 yeas, 19 nays, and 2 blanks.

2. As to revaccination, it should be encouraged in every manner, and even imposed by administrative regulations where it is possible, especially by municipal authorities, wherever the physicians appointed by the state during the prevalence of epidemics, or the boards of health, have called attention to the necessities of this obligation.

Moreover, the Academy expresses the hope that isolation of patients affected with variola, especially in hospitals, be ordered by special legislation.

THE West Virginia Legislature has recently enacted laws to regulate the practice of medicine, practice of pharmacy and also that of dentistry. It has also passed a bill making medical men privileged witnesses before the courts; and another to revoke the charter of the "Livingstone University of America," a notorious diploma-mill. There is also on the calendar a bill entitled "A Bill to Encourage and Regulate the Study of Practical Anatomy."

THE Mississippi State Medical Association held its fourteenth annual meeting at Winona. The President Dr. W. G. Hyer, in the chair.

The following officers were elected for the ensuing year: President, Dr. B. F. Ward; four Vice-Presidents; Recording Secretary, Dr. Wirt Johnson, of Jackson; Corresponding Secretary, Dr. M. S. Craft, of Jackson; Orator, Dr. F. E. Daniel; Treasurer, Dr. G. K. Harrington. The Society adjourned, to meet the next year at Oxford.

CURIOUS INVENTION. In Paris, says the *Lancet*, false ears are a new manufacture for the toilet. Ladies who think they have ugly ears place these artistic productions under luxuriant tresses of false hair, fasten them to the natural ears, and wear them for show. False hair, false teeth, false breasts, false hips, false calves, false ears, false eyes. What next? false hood.

A DISCUSSION is going on in various English medical journals, as to whether beer or ale shall be given as part of the regular ration in hospitals and asylums. To an American it seems absurd to debate such a question. We do not believe there is a single hospital or asylum in the United States in which beer or ale, or any form of alcoholic beverage, is issued as an article of ordinary diet

THE Deaths Annually in New York City exceed the births by about ten thousand.

Gratitude.—AT the recent presentation-day ceremonial at London University, Lord Granville, in his address, related the following anecdote, which we record as a contribution to the next work published on animal instincts. Speaking of the Brown Institute, the noble earl said: "A distinguished member of the Senate was driving along the road in which the institution was situated, when suddenly his hack-cab came to a dead stop. He asked the driver whether his animal was lame or ill, but the driver answered, 'No sir. I never can get him past this place since he had his corn cured here; he likes it so much that he always wants to stop'."—*Brit. Med. Jour.*

TRICHINOSIS.—The lines below, from the London *Punch*, have been reserved, until something equally foolish from America could be put in competition.

TRICHINOSIS (England.)

Says Aaron to Moses,
I've got trichinosis;
Says Moses to Aaron,
T'is because you pork fare on.

NASOTOMY (American.)

Says Aaron to Moses,
Let's cut off our noses;
Says Moses to Aaron,
It's the fashion to wear'em.

Kangaroo-tendon Ligature.—ON April 20th, at St. Thomas's Hospital, we had the opportunity of seeing Mr. Croft tie the external iliac artery for ilio-femoral aneurism. The patient, a man, was in a most exhausted and debilitated condition, and the aneurismal sac showed signs of suppuration. Mr. Croft made use of a carbolised kangaroo-tendon ligature, which had been placed at his disposal by Mr. Thomas Smith; and strict antiseptic precautions were observed. On tightening the ligature, the operator felt it cut through the inner coats of the artery, and pulsation immediately ceased in the sac. The case has gone on most favourably. The man's general health has improved; the wound has entirely healed; the signs of inflammation about the sac have disappeared; and there has been, at the time of writing (twenty-two days after the operation), no return of pulsation in the sac. Feeble pulsation can be felt in the posterior tibial artery, and in small branches in the thigh. The new ligature, therefore has come out of this trying ordeal most successfully; and it has, as Mr. Croft observed at the operation, several manifest advantages. It is easily prepared, and does not, it is said, alter with keeping; it is tough; it is flexible; and it is flat. As to its toughness and flexibility we can bear evidence; the utmost strain that we could put upon it with the hands failed to break it, and a knot held very firmly.

OBITUARY.—Edward S. Maturin died at his residence. No. 27 Clinton place, in this city, on Wednesday, aged sixty-nine years. He was a descendant of a French Huguenot clergyman who escaped from France after the revocation of the edict of Nantes, and settled in Ireland. Both the son and grandson of this clergyman were clergymen of the Established Church in Ireland. The former succeeded Dean Swift in the Deanery of Killala. The father of Mr. Maturin was the Rev. Charles Robert Maturin, Rector of St Peter's Church Dublin, an eloquent preacher. but more widely known as a poet and romance writer. One of the most successful efforts of his genius was the tragedy of "Bertram; or, The Castle of St. Aldobrand," which had an unexampled "run," at that period, of 100 nights, at the Drury Lane Theatre. The copyright of this production was purchased by Murray for 350 guineas, and the play brought the author £1,000. The poet died in 1824, leaving two sons, the oldest, William, now rector of All Saints' Church in Dublin, and the youngest, Edward, the subject of this sketch. Edward Maturin came to this country in 1832 with letters of introduction from Thomas Moore, the poet. Richard Lalor Shiel and other persons eminent in the world of letters, He entered the office of Charles O'Conor and afterward of Mr. Logan as a law student, and in due time was admitted to the Bar. He had graduated at Trinity College, Dublin, with distinction, and pursued in this country his study of the Greek language and literature. The late Professor Anthon of Columbia College recommended him for a vacant Greek professorship in South Carolina. He resided there for some years, and in 1842 married Harriet L. Gaillard, daughter of Dr. Edwin Gaillard, of that State. Returning to New York he was engaged as an instructor of the Greek and Latin languages and belles lettres in various schools of the city, in one of which (that of the late Miss Haines) he taught for thirty consecutive years. He published various romances, among which are "Montezuma, the Last of the Aztecs," which was dramatized and met with much success; "Benjamin, the Jew of Grenada;" "Eva, or the Isle of Life and Death," "Roman Tales" Lyrics of Spain and Erin." "Bianca," &c. Mr. Maturin was a man just and honorable and estimable in all the relation of life—those who knew him best esteemed him most. His deeply rooted religious principles his remarkable knowledge of the Scriptures and his high attainments as a Greek and Latin scholar drew to him men of noble character. When the Bible Union was formed in 1850 he was selected as one of its corps of revisers, the Gospel of Mark being assigned to him.

He was a member of St. Mark's Church under the care of Rev. Dr. Rylance, from which he was buried. He has left a widow, son and daughter.

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MEDICAL NEWS.

"Nulla dies sine linea."

Kaposi has charge of Hebra's great Clinic.——Nine thousand dollars was the amount of Charcot's fee for his late consultation visit to Russia.——There are one hundred and fifty female physicians in the United States with an average income of $3,000.00.——Heridity in Muscular Atrophy seems to be established. Hammond has reported cases; so has Naunyn. Osler furnishes the record of a family showing that in two generations this disease appeared in thirteen members of it.——*The Chicago Medical Review* states that the tendency to make "weak puns" is often seen in terminal dementia, and states that the case of Hughes, the editor of the *Alienist and Neurologist*, is the latest illustration of this sad condition.——The Commissioners of Cook County Hospital (Chicago) recently held an examination of all candidates for the position of interne in that Institution. Dr. Mary E. Bates presented the best record, but the commissioners decided that it was inexpedient to have a female physician in a general hospital. If she had been excluded from the competitive list for this reason no one could have legitimately made any objection, but as it is, the Commissioners have not only violated the terms of an implied contract but manifest a meanness and an injustice that can not be too severely reprehended. Their action is very nearly allied to fraud. If there is ever any justice in law, every one would say that she ought to have and can have legal redress; and there are few genuine men on a jury who would not make this redress ample. She ought to assert her right; punish the wrong-doers and then resign; for there is no doubt of the fact that such an office is not a proper one for a woman of delicacy or refinement.——Asylum Conflagrations continue, and the feeling of the Public are repeatedly harrowed by the publication of the sad details and terrible results. These horrors are all due to the insane desire to construct hospitals for show, rather than for safety and utility. Cottage hospitals only are safe for such purposes, and if every Medical man on Asylum Boards or having influence with these nondescript Bodies would insist on the criminality and danger of the large three, four and five story Asylums, so fashionable and so often fatal, the insane would be in a far better and safer condition, and the debt of Public justice and protection in their behalf would be more adequately discharged. Palaces for the Insane are not only absurd, unhealthy and ruinously costly, but they are fire-traps which the good sense of the Medical Profession should have thoroughly appreciated.——Dr. W. J. Holt, of Montgomery, Ala., "died the other day." His loss is much deplored.——Died recently Mrs. Annie H. Butler, wife of Dr. S. W. Butler, the former editor of the Philadelphia *Medical and Surgical Reporter*. This estimable woman died at Asbury Park, N. J., May 9th, 1881. ——The Northern Medical Society of Philadelphia has just elected as members two female physicians; Drs. Ida Richardson, and Hannah Croosdale. There is no other Medical Society in the City of Brotherly Love which admits female membership. New York has no objection to them.——Bleeding in Pneumonia An Adjuvant.—Dr. S. D. Gross, at a late meeting of one of the Sections of the American Medical Association, at Richmond, Va., stated that "we employ bleeding simply as an adjuvant ! ! " Can not some philo-phlebotomist who venerates the memory of Heberden, and Alison, and Abernethey, etc., term this mild method of interference "a placebo ?" That it is attended with a mortality of 32 per cent., when a 7 per cent. mortality is rationally attainable, is a matter of no sort of consequence. Though Bennett lost by rigidy putting aside the Lancet 1 in 33, and though by the use of the Lancet, Alison buried 1 in 3, still bleeding may be declared an adjuvant, if the speaker has reference, not to the patient, but to the sexton ! !——Medical Department Ann Arbor University.—It is of course well known that the Faculty of this Institution have for years been instructing the students of the Homœopathic department of the University and (more than this) have been examining them, certifying to their fitness for Practice, and signing their diplomas. The American Medical Association, at its recent meeting in Richmond, Va., resolved that this should no longer be done. They may teach homœopaths, but can not examine them, or sign their diplomas.——Died.—Dr. A. J. De Rosset, associate editor, *N. C. Medical Journal*, at Wilmington, N. C., May 1st, 1881; a good man, an excellent physician, an able writer, and an editor justly admired and popular.——Dr. Woolsey Johnson succeeds Dr. E. G. Janeway as Health Commissioner of New York City.——AN EXCELLENT EDITION of the Chicago *Medical Review* was issued during the late meeting of the State Medical Society.——THE NEW YORK *Medical Journal* and *Obstetrical Review* will be the future title of the New York Medical Journal.——SHOP-GIRLS in New York should be thankful to the Legislature of their State for passing a law requiring their employers to provide seats for them. The brutal tyranny of compelling women employed as clerks to stand ten to twelve hours per day is at an end.——THE *Arkansaw Medical Doctor*, a sixteen page monthly, will be published at one dollar a year. Unless the editor knows a little more of grammar than is manifested in his Prospectus, it is not probable that more than one edition will ever be issued. The editor says that his Journal "Is *run* in the interest of neither a medical college *or* manufacturing pharmacist. Its aims to disseminate practical knowledge of the advances being made by the profession throughout the world, without necessitating its readers to con page after page of the productions of sanguine theorists *with a view to which* the articles in the *Doctor* will be brief but to the point."——THE *Cincinnati Lancet and Clinic* published, in brief, a telegraphic report of the recent proceedings of the American Medical Association. Bravo.——PROF. Alfred Stillé has resigned his chair in the University of Pennsylvania. He was for several years one of the assistant editors of the Richmond and Louisville *Medical Journal*.——THE New Orleans *Medical Journal* will hereafter be reduced from 100 pages, to 80 and published at $3.00 per annum instead of five.——THE Chicago *Medical Journal* publishes, as a supplement to its June number, a very valuable report of the Proceedings of the late meeting of the American Medical Association.——ASSOCIATION OF MEDICAL EDITORS met at Richmond, Va., and elected officers for the next year :—Dr. L. B. Edwards, Pres. ; Dr. Ralph Walsh, Sec. ; and Dr. Reynolds, Treas. This Association is now twelve years old, and so far has never done anything more than to elect officers.——*The Independent Practitioner* of Baltimore is to be moved to New York in July.——A NEW Medical Weekly will, it is said, soon be published in this city. It is alleged that $20.000 have been subscribed. This will be consumed in a few months. With five times that amount, the field might be made to yield the Journal a support.——THE Voice of the American Exchanges in regard to the Beaconsfield-Kidd-Quain matter has been heard. There are but two of seventy Journals that sustain Dr. Quain.——DR. J. Marion Sims, in a communication received just before his sailing for Europe,is hopeful of entire recovery. He is not yet as his friends desire him to be.——SNAKE Stones used in Ceylon for absorbing the virus, are said, on the authority of the lamented Faraday, to be masses of calcined bone. Suction is worth a dozen of them.——VALUE of Expert Testimony.—In the case of the State vs. Hakers, tried in Toledo, Ohio, the Judge refused to compel the medical witness (who had made the post mortem) to express his opinion as to the cause of death, unless he received the fee of an expert. He declared that such a course would be unjust and that the law needed amendment.——DR. L. H. SAYRE.—The suit of Mrs. A. Morgan against Dr. Sayre, for alleged injuries from an over dose of nux vomica has failed utterly. The dose was one grain. The suit was evidently malicious. The injuries imaginary. The failure just.——A NEW Device.—As Medical Journals at last refuse to send specimen copies to the pitiful thieves who ask from each this gratuitous boon, the new device is to ask for them, "with a view of advertising." The writers of these cards are the same old rogues in a new dress.——DR. QUAIN, who consulted with Kidd, the Homœopathist, is about to receive from Her Royal Highness, Queen Victoria, the title of Baronet, in grateful acknowledgment of his obliging her majesty in making the consultation mentioned. *Sic itur ad astra.*——THE NEW STREET CLEANING BILL just passed and now made a law by the corrupt legislative traders at Albany, N. Y., is so imperfect and inefficient that when Commander Gorringe (of Obelisk fame) was asked by the Mayor of New York, to become Commissioner in charge of this department he declined, stating that though he needed the pecuniary support thus given, he could not accept such a responsibility when the bill deprived him of all power to meet it efficiently.——*The Rocky Mountain Medical Review* has been removed to Denver, Colorado.——Dr. Salvatore Caro of N. Y., died April 30th.——Surgeon J. S. Billings is detailed as a delegate to the Inter National Medical Congress which meets at London in August next.——Mrs. (President) Garfield was attended by Mrs. Susan A. Edson, M.D.

NEW ORLEANS IS TO BE SEWERED!—The *Times* announces the vote of the City Council adopting the Waring system by a vote of five to two. And adds: "The city is to be sewered. We want all the world to know it. The city is to be drained. We want all the world to know it. The city is to be clean, sweet, fragrant with rose blossom and orange blossom, with jasmine and lily-bell, and we want all the world to know it. The city is to be the healthiest on the continent, and we want all the world to know it."

BUSINESS CHANGE.—Parke, Davis & Co., of Detroit, Mich., have purchased the pharmaceutical branch of the business of Messrs. Reed & Carnrick, the popular manufacturers, who state that the growing demand for their maltine compels them to devote their entire capacity to its production.—*Monthly Price-list of A. Peter & Co.*

THE Supreme Court of New York has granted the order to change the name of the corporation of "*Scribner & Co.*" to "THE CENTURY CO."—the order to take effect on the 21st of June. The July issues of *Scribner's Monthly* and *St. Nicholas* will have the new corporate imprint.

THE Berlin correspondent of the *Times* says:—"An American lady is attending the lectures of the celebrated physiologist, Professor Virchow. This is the first instance of a female student at the University of Berlin."

COMPARATIVE PHYSIOLOGY.—Fanny, a very aged carp in the ponds at Fontainebleau, well known to the people of Paris, has just died. She is said to have been hatched during the reign of King Francis I, and had become very gray.

CHRISTINA MARSHALL, THE SCOTCH "FASTING GIRL."—The fasting girl at Strathaven, having been threatened with confinement in a lunatic asylum, commenced to eat freely of porridge, and since then has been supplied with milk, broth, and beef.

THE Society of Medical Practitioners of St. Petersburg, at their meeting of May 2nd, decided to admit medical women to the membership of the Society.

H. LENOX HODGE, M.D.—Dr. H. Lennox Hodge died at his residence in Philadelphia May 10. Dr. Hodge was born July 30, 1836, in Philadelphia, his ancestors having settled in this country as early as 1730. His grandfather served in the army during the Revolution and his father was the well known physician, Dr. Hugh L. Hodge, who was conspicuous for his services during the great cholera epidemic of 1832. His mother was of the Aspinwall family, of this city. He received a collegiate education, which terminated in 1855, studying medicine at the University of Pennsylvania, graduating in 1858. In the fall of that year Dr. Hodge became resident physician of the Pennsylvania Hospital, retaining that office until the spring of 1860, when he entered upon the practice of medicine. In 1861 he was appointed Demonstrator of Anatomy in the University of Pennsylvania, and began, in the same year, the instruction of private classes on Chestnut street, between Ninth and Tenth streets. Shortly after he began a series of lectures on "Anatomy and Operative Surgery." In 1870 he was appointed Demonstrator of Anatomy in the University of Pennsylvania and about the same time became attending surgeon at the Children's Hospital. When the Presbyterian Hospital was opened at Philadelphia, in 1872, he became attending surgeon at that institution. In 1869 he was married to Harriet Roosevelt Woolsey, of New York. He served during the civil war under the volunteer call of surgeons, was attached for a time to the Satterlee Hospital at West Philadelphia, and then joined the Pennsylvania Reserve Corps of Surgeons. He accompanied the Army of the Potomac at the time of General McClellan's advance on Richmond and was engaged professionally in the campaign of Pennsylvania during the invasion by Lee, and was present at the battle of Gettysburg. He also served under General Grant during his advance on Richmond, and was with the army at the battle of Fredericksburg, besides doing good service on various occasions. On his return from the war he resumed his practice. He was a member of the American Medical Association, the Philadelphia Medical, Obstetrical and Pathological societies, and was president of the latter Body and a Fellow of the College of Physicians. He contributed freely to medical literature, his papers being regarded as of high importance.

THE INTERNATIONAL MEDICAL CONGRESS.—It is anticipated that not less than 2,000 foreign medical practitioners will visit London next August, on the occasion of the International Medical Congress to be held in the early part of that month. It is almost certain that in point of attendance, variety of attraction, and extent of opportunities for observation, the London Congress will far surpass any of its predecessors.

By the change in the Presidency of the College of Physicians, Sir W. Jenner becomes *ex officio* Chairman of the General Committee of the Congress, a post, the duties of which have up to the present time been discharged by the Chairman of the Executive Committee, Sir Risdon Bennett, M.D.

ALUMNI PRIZE.—The prize of the Alumni Association of the College of Physicians and Surgeons, New York, of $500, for an original essay on some subjects connected with medicine or surgery, is open only to the competition of the Alumni of the College of Physician and Surgeons. The conditions upon which the prize will be awarded are as follows;

1. The subject is left to the option of the competitor.

2. The essay must present sufficient original experimental or clinical observation to make it a useful contribution to medical knowledge.

3. The essay, designated by a motto, must be sent to a member of the Committee on Prize Essays, accompanied by a sealed envelope inscribed with the same motto, and containing the name and address of the author, on or before, April 1, 1882.

Albert H. Buck, M.D., 109 Madison Avenue.

Charles McBurney, M.D., 40 West 26th Street.

George L. Peabody, M.D., 55 West 38th Street.

Committee.

GIVING UP THE USE OF THE GERMAN LETTERS.—In view of the opinions lately expressed by eminent oculists, that the reading of German text is injurious to the eyes, the Bernese Government have resolved as much as possible to discourage its use, and all their official announcements and reports will henceforth be printed exclusively in Roman characters.

THE OLEOMARGARINE BILL OF NEW YORK, which obliges oleomargarine to be sold under its own name, has passed both Senate and Assembly.

DR. EDMUND M. LANDIS, a prominent physician of Chicago, died May 6, 1881.

A BILL to regulate the practice of medicine in Arkansas has passed the Assembly.

DR. JNO. DAY, a prominent physician of Geelong, Australia, died January 10, 1881, in the sixty-fifty year of his age.

THE Rocky Mountain Medical Review has been removed from Colorado Springs to Denver, Colorado.

Dr. Ludwig Waldenburg, editor of the Berliner Klinische Wochenschrift, died April 28, in the forty-thiry year of his age.

Surgeon General Barnes has been placed on the retired list and Dr. J. H. Baxter, Medical Purveyor General, has been nominated as his successor.

The Cincinnati Lancet and Clinic says that the physicians of Nashville have petitioned the Common Council to prohibit the tolling of bells for funerals, as the tolling has had a very injurious effect on the *rest* of their patients. Is there a pun intended on the word rest ?

REGISTRATION.

BORN.

May 8, 1881, to Dr. and Mrs. J. M. Hicks, of Goodman, Miss., Clarence Gaillard Hicks.

April 6, 1881, to the wife of Dr. W. S Holliday, of Monmouth, Ill., a son, Alexander Gaillard.

EDITORIAL.

" Nullius addictus jurare in verba magistri."—Hor.

BUSINESS NOTICES.

Permanent Post Office Address.—All letters, manuscript, registered matter, etc., should be sent to the editor, and directed to Box 1124, New York.

Editor's Local Address : 462 West 34th Street.

Exchanges should be directed as follows: " Gaillard's Medical Journal," Box 1124, New York.

Publications for Review Department should be sent to " Gaillard's Medical Jounral, care of E. R. Pelton, 25 Bond Street, New York.

Post Office Money Orders should be drawn on New York, and in favor of E. S. Gaillard.

Failures to Receive a Journal, removals, and any change to be made in a Post Office address should be promptly reported.

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The President's Wound is between the tenth and eleventh rib, and at a spot four inches from the spinal column. Both ribs were splintered, and one fractured. Up to July 10th, this is all that is definitely known.

It is alleged that the liver is wounded, but the absence of characteristic shock, of hæmorrhage, of the discharge of bile and venous blood through the wound with the low grade of fever and the non-appearance of peritonitis render it improbable that the liver was penetrated, or that the peritoneum was injured.

The examinations made have been very crude, inefficient and unreliable. The probe was useless; and the little finger is, of course, too short to do more than pass through the lumbar muscles and fascia.

The site of the ball is as yet unknown. It is most probably in the lumbar muscles.

The removal of the patient at such a time, and in such a vehicle, and at such a gait was very unwise. It is wonderful that it did not produce greater injury than was so clearly manifested.

The bad initiatory treatment; the failure to explore the track of the ball, and the consequent groping in the dark makes a bad record. While the scandal of the doctors' quarrel is lamentable. The gravity of the wound has been ignorantly exaggerated.

The Beaconsfield Controversy.—There is "some talk" in regard to displacing Dr. Ernest Hart the accomplished and successful editor of the *British Medical Journal*, for supporting Dr. Quain in consulting with Dr. Kidd, the homœopathist at the bedside of Lord Beaconsfield.

As to the simple substitution of one editor for another, in the management of an English Medical Journal, few if any in this country can take any interest (unless on personal grounds) but every one can and will take an interest in this change, when the reasons alleged are considered. When a respectable Journal sustains the course adopted by Dr. Quain, the question ceases to be one of individuals, and becomes one of principles. Certainly if it was justifiable for Dr. Quain to consult with a homœopath, and to be justified therein by the Profession and its literary exponents, it must be justifiable for any regular medical practitioner to consult with any irregular medical practitioner. And such an act is not only directly in violation of the code of laws which every physician is bound to observe ; it is not only a clear infraction of the oath impliedly taken by every member of every reputable medical society, but it is an open and public disregard of every consideration of honesty and propriety in accepting a fee for "a consultation," when a consultation in the literal meaning of the word and in the moral acceptation of the act is impossible. In a consultation there must be either agreement or compromise. Between an honest homœopath and an honest regular practitioner there can logically be no agreement, and any compromise must be a compromise not (as is usual) as to medicines, but as to principle and principles. As Sir William Jenner said, most succinctly and ably, "I decline to consult with you" (Dr. Kidd, the homœopathic attendant of Lord Beaconsfield) "because no agreement is possible, and with me compromise is impossible."

To say, as has been said, that Dr. Kidd was not a regular homœopath, but that he only practiced homœopathy at times, because he "does not believe in the universality of the law," renders the alleged consultation still more inexcusable. It was an alleged consultation (with a fee received) with one who had avowedly no fixed professional principles; a man willing to march, for pay, under one flag to-day, and under another the next; a convicted professional Hessian, doing service in armies avowedly hostile and antagonistic and receiving reward for service in all.

The violation of principles, propriety, and an implied oath in a consultation between a regular practitioner and homœopath when abstractly considered is wholly unjustifiable, but it becomes infinitely worse when the consultation is between a regular practitioner and one who is a homœopath at one bed-side and a repudiator of homœopathy at the next; a man avowedly without fixed professional principles. Such a consultation is both personally and professionally doubly dishonorable and inexcusable.

To claim that there should be an exception in behalf of "so illustrious a patient" sets up a plea as dishonorable as the act. The principle and the principles which guide a regular practitioner are not influenced by the bank account or the social positions of a patient ; and never can honestly be so influenced.

To urge that humanity required an exception to the regular rule is puerile beyond expression. If the patient or his friends really desired different counsel or better counsel this was easily attainable. The ablest men in London or on the Continent could have been promptly at the bedside if the counsel sought would have been unobstructedly and honestly received. But it was not honest to ask or expect counsel to be responsible for a life when the means deemed necessary for its preservation could be repudiated or rendered ineffective. What honest lawyer would take charge of a case when his defence could at the pleasure of any one be repudiated, emasculated or rejected ? And if this be a patent folly in the legal charge of a case, how infinitely greater the folly when the charge of the case is not legal in character but absolutely vital. To ask advice under such circumstances and intent was as improper as it would have been dishonorable to offer it.

Lastly, to say as has been said "who are we, that we should sit in judgment in an affair of conscience ;" who are we that we should judge Dr. Quain ? is to ask a question so childish that it is almost impossible to reply with courtesy. What is the basis of action with every jury, and every judge, and every individual, but the claim recognised by God and man, that every one is endowed with a perception and appreciation of right and wrong, and that, with the facts and evidence presented, a verdict or decision is not only demanded but unavoidable ? Should the acts of all men be socially and legally judged, provided there be but a single exception in favor of Dr. Quain?

That Dr. Ernest Hart is using the *British Medical Journal* for disseminating very pernicious and dangerous opinions in regard to the most radical and important question of professional propriety and honesty is undeniable; that he should be punished for advocating his honest opinions, by removal from office would be an outrage; but that, while according to him all due consideration for his opinions, those who select him as a representative and executive can elect another more throughly approved, no one can reasonably deny. This principle and fact underlies all government, and the owners of the *British Medical Journal* like the owners of all property can certainly, with propriety change their executive officer when his opinions are not approved and his acts are believed to be dangerous and unwise. Such a removal would be a great loss to the Profession and to Journalism, but the retaining of one so able renders the danger to the Journal supreme and undeniable. Perhaps the true and best course would be that suggested by Henry Clay, when he spoke to his grand constituents of riflemen in Kentucky.

It will be remembered that when this great statesman displeased by public acts his entire constituency and they determined to select another representative, he, in addressing them "from the stump" asked this ingenious and pertinent question: "my friends" said he, "if an old buck started before you, and drawing old Betsey (the rifle) to your face you pulled trigger and she missed fire, would you break her up and throw her away; or would you pick the flint and try her again?" The splendid anecdote so timely told by the great orator saved him from removal and gave to his country one of whom she will be proud forever. So be it with the leader of the *British Journal* constituency; and so may he be retained to give continued glory to Journalism and pleasure and profit to the Profession.

PATENT MEDICINES.—At the last meeting of the American Medical Association, the following resolution having been brought before the Section on the Practice of Medicine, was presented by it to the Association, and then referred to the Judicial Council, for report at the next annual meeting. As the whole matter involved is one which may not only modify the Code of Ethics, but which now concerns every physician, a few remarks may aid all in coming to a decision when the question is presented for vote, and, in the meanwhile, in entertaining a correct view on the subject of Patent Medicines. The resolution is as follows:

"*Resolved*, That the spirit of the Code of Ethics forbids a physician from prescribing a remedy controlled by a patent, copyright, or trade-mark. *This, however, shall except a patent upon a process of manufacture or machinery, provided patent be not used to prevent legitimate competition; and shall also except use of a trade-mark used to designate a brand of manufacture, provided that the article so marked be accompanied by working formulæ, duly sworn to, and also by a technical, scientific name, under which any one can compete in manufacture of same.*"*

It will be impossible in so brief a space to critise the diction of this resolution, though this is so utterly bad as to render the object and meaning of the framers and presenters of it nearly unintelligible; it will be simply assumed that the Section on the Practice of Medicine received it, and discussed and presented it to the Parent Body, as intended to signify a reprobation and repudiation of all physicians who use medicines "controlled by a patent, copyright or trade-mark," with the exceptions specified in the resolutions.

The framers and presenters of this resolution, seem to be ignorant of a notorious and demonstrable fact, viz., that a *patent* medicine is not a secret preparation. Patent medicines are evidently regarded by the handlers of the resolution as secret nostrums; whereas no patent has ever been granted, or can be granted for a medicinal preparation, unless the formula is not only recorded, but actually published for the information of the Public.

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* That portion of this resolution which is given in italics is, for obscurity, grammatical inaccuracy, nonsense and absurdity, the champion sentence in medical literature.—ED.

All the exceptions therefore made in the resolution in regard to patent medicines (as secret medicines) are therefore unnecessary and foolish. The composition of patent medicines if not well known can always be ascertained.

The same facts are true in regard to copyrights and trade-marks; for no protection is granted in this country to any medicines, whether patented, or copyrighted, or trade-marked, unless the working formula is made known. If a name, title, designation, motto, or device, of any medicinal preparation be by accident or ignorance protected by legal process, when the ingredients are not recorded, and the parties claiming it be granted a trademark, or copyright, such medicinal preparations are of course merely nostrums or secret medicines which no sensible or honest physician would use. Their use is already virtually forbidden by the Code. The exceptions in the resolution in regard to such preparations are therefore useless, and the real question is, whether physicians knowing the contents of patented, copyrighted, or trade-marked medicines shall be justified by the Profession in using them. The answer to this is simple.

The intent of the Code of Ethics in repudiating secret preparations is to prevent any physician from using absolute medicinal forces of whose nature he is ignorant. And this intention is manifestly to protect the public from harm, as well as the profession from disgrace. For no physician could use such unknown agents without disgrace.

The ethical law is then only so framed as to render absolutely certain the uniform adoption of a rule which any medical man of common sense and honesty would make for himself. It may, like other clauses of the Code of Ethics, be justly regarded as superfluous, but as it stands, so let it stand. As to adding to it the provision that it shall be also unethical to use medicinal compounds of known composition when protected by patent, copyright or trademark, every one would naturally ask why this should be done? What physician of ordinary sense would purchase or prescribe an expensive medicinal compound (patented, copyrighted or trade-marked) when (its ingredients being known to him) he could secure for himself or his patient the same results, by varying the formula, as he does with all formulas, to meet the varying indications that may arise?

It is manifest therefore that the legislation asked for in this resolution is not only unnecessary, but that such action would render all concerned ridiculous and absurd.

A Cruel and Infamous Evil. Few readers are aware how very often there is an absolute change in the medical superintendentcy, and in the medical staff of American Hospitals for the Insane; or, as they are now termed, Insane Asylums. As a general rule, the medical superintendent nominated by the Governor is selected by the Trustees, or is removable by the Governor, and his successor elected through the Governor's influence. Certainly in almost all of the States, the office if not thus obtained is at least virtually political in character, and is obtained chiefly through political influence. Experience, fitness, special and general professional preparation for the work seem to command no influence, and it is unfortunately a fact of most ordinary occurrence, that a superintendent and his medical officers, with either natural or acquired fitness for their positions, are (for no reasons whatever, certainly for no proper reasons) thrust aside, and the vacancies thus created filled by the appointment or election of those who have no experience whatever; and whose work official, professional and administrative is absolutely experimental, if not grossly inefficient. It is useless to do more than to mention such facts, without comment, to have the whole system denounced as cruel and infamous; a condition of affairs not only worthy of the attention of every humane physician, but crying aloud for his aid.

Indeed it is almost impossible for one to believe that such is really the truth in this country; that so many worse than helpless individuals, crippled mentally and powerless physically, are, by the hundreds and thousands, the victims, the pitiable victims of so infamous and pityless a policy. And yet such is the fact.

One of the most recent exemplifications of it is here given; the facts and the language being taken from a source beyond criticism:

> "A surprising change has been made in the medical staff of the West Virginia Hospital for the Insane. Dr. William J. Bland, of Weston, has been appointed Superintendent in place of Dr. Thomas B. Camden, who succeeded Dr. Hills, the first Superintendent of the Hospital, ten years ago, and has since occupied the position creditably to himself and acceptably to the State.
>
> "Dr. M. F. Hullihen, of Wheeling, succeeds Dr. A. H. Kunst, who has had fourteen years' training in the institution, or from the date of its establishment to the present, as First-Assistant Physician.
>
> "The office of Second-Assistant Physician has been conferred on Dr. Lewis, of Jefferson County, a young gentleman of promise in his profession."

While Dr. Bland is believed to be professionally competent for such work, it is absurd to claim that he is more so than his predecessor, and it is still more absurd to suppose that, in the very important administrative and executive work devolving upon a superintendent, there could be any comparison whatever; for though according to him the most exalted professional fitness and capacity, he can know absolutely nothing of the really vital administrative details of his position. He can learn these only by experience, and meanwhile who can estimate the errors and suffering resulting from such a lamentable and inexcusable evil!! And what is manifestly true in regard to his appointment and work is equally true in regard to the appointment and work of Dr. Hullihen and Dr. Lewis. These are both professionally accomplished, but they displace others equally so; and while these last are fully acquainted with executive and administrative work, as well as with all professional requirements necessary, their successors know absolutely nothing of duties even more important than those incumbent merely upon the physician.

Dr. Camden has discharged his labors handsomely and efficiently, and had at the time of his removal ten years' experience. His staff was, it is said, fully competent.

How can these removals be justified; and what better illustration could be given of the infamous system so general in this country?

These recent removals are not stated for any other purpose whatever than to illustrate an infamous and cruel system, and to vindicate at the same time, and with pleasure, the character and reputation of those who might, as grievously as unjustly, be injured by such wanton action.

It is useless to multiply examples; *ex uno disce omnes;* from one judge of the whole. It is equally useless to add any comments; each reader can equally well make them.

These facts are given and the system described to command attention; for to secure the attention of the Profession to a widespread evil and a cruel abuse is to secure speedy and radical reformation.

State Societies should denounce such dangerous and stupendous evils and should lay before their Legislatures and the Public the proper suggestions for their correction and redress.

THE MEMPHIS SEWERAGE SYSTEM.—The following facts from the Mississipp, Valley Medical Monthly are republished promptly and with much pleasure.—E. S. G.

Under the heading of "Bad News from Memphis," GAILLARD'S MEDICAL JOURNAL for May says:

"The Waring system of sewerage introduced at Memphis, with such bright hopes and sanguine expectations, does not seem to do as well as was anticipated—bones, chips, sticks, etc., are sufficient to obstruct the flow through the pipes,"

The able editor of the JOURNAL has been misinformed. The Waring system works as well, and even better than was expected. It is true that in a few instances, not more than three or four, the four-inch house connection pipes have become stopped up, but this was the result of negligence, and was easily remedied. In two instances the six-inch lateral pipes have become choked, but these also were readily cleaned out by contrivances adapted for the purpose In no instance has one of the fifteen inch mains become filled up, and it is not at all probable that anything of that sort will occur.

As the people become more accustomed to the use of the sewers the stopping up of connection pipes will become a rarity; the householder must pay for the cleaning out, and it will be to his interest to see that all bulky material be excluded from the drains.

The possibility of the occasional choking up of the smaller pipes is admitted, and the occurrence of such accidents was contemplated in the original plan, and ingenious contrivances provided for easily remedying the evil. It has never been claimed that this system is perfect—we know of no system of sewerage, or anything else invented by man, that is; but it has proven itself eminently satisfactory, and Memphis has no reason to regret having adopted it. It does all that was claimed for it; decomposing matter cannot accumulate in the pipes, and we have no such thing as sewer gas; there have not in the past six months been in Memphis a half dozen deaths from causes the production of which is attributed to that gas. Taken all in all, the Waring system of sewerage as adopted in Memphis has proven a good one, and those who have seen most of it are loudest in its praise.

THE ASSOCIATED PRESS accomplished the great feat, when the American Medical Association met, at Richmond, Va., of telegraphing the name of the clergyman who offered the invocation prayer at the opening exercises; beyond this, it mentioned nothing, either on that day or any other. If Cornell or Hanlan had been announced to pull a couple of canoes over a couple of miles of river water; or if Slosson and Vignaux had been bulletined to push a billiard cue for a day or two; or if some blackguard had been announced to pummel the face of one of "the fancy" into a blue jelly, there would have been a column or more of details telegraphed to all leading papers!!

Is it not marvellous that this wealthy and powerful organization can not select operatives with sufficient intelligence to discriminate between the sporting details of a set of betting rowdies, and the proceedings of a learned Body representing 60,000 scientific men? Physicians should admire and patronize the Associated Press.

READY MADE REVIEWS.—Can the reader imagine what these are? It would be impossible to do so until these frauds are seen or explained. The readers are then informed that it has become the custom for editors, authors or publishers of works to have complimentary reviews of them prepared and these being printed to have a copy of this review sent to the Press with each copy of the work. The same custom is also observed in regard to magazines, etc. Editors who refuse to publish these frauds upon their readers, see them constantly published by others. Those who take a few Journals, will find very often, a review published in one, verbatimly appearing in the other, and not because there is any plagiarism, but because each journal has published the review sent with the work received. Many literary magazines have printed on postal cards flattering notices of each issue, and these are sent by the thousand to the Press to be reprinted by the million. Everyone will say, "that this is dishonest," and so it is; and yet it is a part of the machinery of the modern publisher. How few of the thousands who read the literature columns of the first-class Dailies, and the review departments of most of the best Journals, dream that the crisp, curt, pithy notices of new books "just out" are sent by their authors or publishers.

INSURANCE AGAINST SICKNESS.—Prince Leopold has recently made a most excellent suggestion for the relief of hospitals. He advises that the working classes be induced to insure themselves against sickness, that when sick, they may not be compelled to go to hospitals, but have the means of employing their own physicians. This resolution would not only relieve hospitals and diminish charity service so immensely bestowed by physicians, but would furnish a most generous and liberal support to thousands of the medical Profession.

THE DAILY EDITION OF THE *Virginia Medical Monthly*, during the late session of the American Medical Association, at Richmond, Virginia, was admirably issued and its editor, Dr. L. B. Edwards, is entitled to the gratitude and thanks of the Press and of the Profession for his efficient and excellent labors.

CHOLERA INFANTUM.— It has been found, in the treatment of cholera infantum, that there is a great advantage, if not absolute relief, to be obtained by the use of lactopeptine, with the food directed. The *modus operandi* of this result is of course too well-known to need description, but of the good effects of this treatment there can be no doubt.

TONSILLOTOMY AND VIRILITY.—The exchanges are publishing facts tending to show that the removal of the tonsils destroys virility. Dr. F. A. Dunsmore, of Minneapolis, Minn., states that his tonsils were removed by Prof. F. H. Hamilton, in Feb. 1875. He married subsequently and in May, 1878 his wife was delivered of a male child; and of twins in Dec., 1880; *ex principiis nascitur probabilitas : ex factis vero veritas.*

The doctor's *premises and facts* leave to the public no room for doubt as to their conclusion. He does not state whether his conclusion has as yet been reached or not, and those who weigh the peculiar arguments which he offers must admit that his conclusion is as yet doubtful.

FERGUSON'S PUN.—When Sir William Ferguson, the celebrated surgeon, was called to Brest to perform a surgical operation, he said that it was the only occasion on which he felt like a baby, and on being asked why, replied, because I am going to Brest.

BALDNESS AND PURITY.—The Rev. L. Patterson, in 1670, consoled a bald-headed friend, by sending him these remarkable lines; "If by your hairs, your sins should numbered be, Angels in heaven are not more pure than thee."

THE BEST OF FEES:

"Fee simple and the simple fee,
And all the fees entail
Are nothing, when compared to thee,
Thou best of fees, fe-male."

AN APOLOGY—A touch of the old malarial fever requiring an adjournment to the sea-shore and the sending of all *copy* and *proof* nearly one hundred miles has delayed this number, but as the delay of a Monthly by a week or two does not impair any interest or value it may possess, the subscribers will it is hoped, excuse the tardiness of the issue. The House which executes the work pledges itself to be more prompt, and, with their increased facilities for doing well every kind of "printing," the Journal will no doubt be soon issued "on time."

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